Encyclopaedia Natura Medica

The Grand Reference on Medicinal & Astral Virtues of Herbs & Minerals

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Teresa Baldwin
Vincent Scalzo

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Encyclopaedia Natura Medica

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Encyclopaedia Natura Medica is a comprehensive account of Medicinal and Astrological values of Herbs and Minerals, picked up from various Therapeutic Traditions of the world and arranged into six parts over four volumes. It takes a detailed account of Dr. Nicholas Culpeper's study of European herbs and minerals and also lists about 3000 herbs found in different parts of world for their medicinal and astral importance. This Encyclopaedia is a valuable reference for everyone interested in holistic or natural medicine and combines updated information on herbs and minerals with the ancient knowledge.

The First part of the encyclopaedic compilation is named *An Introduction to Herbal Traditions* and discusses Herbs, Herbalism and Traditions in Herbal Medicine along with Herbs and Traditional Medicine in China.

Part Two describes more than 3500 Herbs and its medicinal components, dose preparation, administration and safety.

Part Three and four are brief yet most importantly have been exclusively devoted to Poisonous Herbs and Aroma Therapy.

Part five and six of the Natura Medica carry Nicholas Culpeper's Studies of the herbs and minerals, detailing their medicinal and astral importance in human life. The last section briefs the reader about common methods for preparing powders, syrups, simples and compounds from herbs and minerals for the use of general physician. Lastly, we hope Natura Medica has succeeded in giving the a consolidated and useful information for a healthy and holistic life.

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ENCYCLOPAEDIA

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The Grand Reference on Medicinal & Astral Virtues of Herbs & Minerals

Vol. II

ENCYCLOPAEDIA
Naturā · Medica

[The Grand Reference on Medicinal & Astral Virtues of Herbs & Minerals]

Editors :

Teresa Baldwin

Vincent Scalzo

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ENCYCLOPAEDIA NATURÃ.MEDICA
THE GRAND REFERENCE ON MEDICINAL & ASTRAL VIRTUES OF HERBS & MINERALS
by TERESA BALDWIN, VINCENT SCALZO
[4 Volume Set]

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Our Editors

Teresa Baldwin is a medical herbalist living on Vancouver Island in British Columbia. She has an extensive background in orthomolecular nutrition and allergy therapy as well as clinical aromatherapy. After a year long journey embracing North America, China, Russia, Eastern Europe and the Middle East, Teresa became deeply involved in the herbal renaissance that is underway in North America. She currently heads *The School of Herbal Studies*, Canada's respected centre of herbal education and regularly teaches in Canada, USA and New Zealand. She is also the author of *An Encyclopedia of Natural Healing for Children and Infants.*

A herbalist, botanical researcher **Vincent Scalzo** has co-authored several books with Teresa Baldwin including *Herbal Solutions for Healthy Living* and *Traditional Medicines from the Earth*. He also specializes in traditional Chinese medicine and Naturopathy. Vincent has a garden of his own where he cultivates medicinal herbs. An ardent practitioner of Yoga, he maintains and prepares many antique potions of Dr. Culpeper, many of which, he finds, have magical effect on health and well being.

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DAISY

Name: Daisy.

Biological Name: Bellis perennis Compositae.

Other Names: Daisy.

Parts Used: Fresh or dried flower heads.

Active Compounds

—Saponins

—Tannin

—Essential oil

—Flavones

—Bitter principle

—Mucilage.

Remedies For

Expectorant, Astringent: Daisy is useful for coughs and catarrh, and for all conditions that manifest in these forms, Daisy may be used freely and safely. It has a reputation of value in arthritis and rheumatism as well as in liver and kidney problems. Due to its astringency it is also useful for diarrhea.

Combinations: For respiratory catarrh it may be used with Golden Rod or Coltsfoot.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and leave to infuse for 10 minutes. This should be drunk three or four times a day.

Tincture: Take 2–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

DAKACHRU

Name: Pashana Bedha.

Biological Name: Saxifraga ligulata.

Other Names: Pakhanbed, Dakachru, Pashana Bedha.

Description: This herb is found in India.

Parts Used: Rhizome.

MEDICINAL APPLICATIONS

Action

Astringent, demulcent, diuretic, lithotriptic.

Uses

—Cough

—diarrhea

—fevers

—tumors

—urinary stones

—vaginal diseases

Dosage

Decoction, powder, paste.

Safety

No information about the safety of this herb is available. Use caution. Ayurvedic herbs are often taken in combination with others to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

DAMIANA

Name: Damiana.

Biological Name: Turnera diffusa.

Other Names: Damiana.

Active Compounds

Most research has been done on the essential oil of damiana, which includes numerous small, fragrant substances called terpenes. As yet, it is unclear if the essential oil is truly the main active fraction of damiana. The leaves also contain the antimicrobial substance arbutin, alkaloids, and other potentially important compounds.

History

Damiana has been hailed as an aphrodisiac since ancient times, particularly by the native peoples of Mexico. Other folk uses have included asthma, bronchitis, neurosis, and various sexual disorders. 2 It has also been promoted as a euphoria-inducing substance at various times.

Remedies For

Damiana is Useful for

—Depression

—Impotence/infertility (male)

Description

The leaves of damiana were originally used as medicine by the indigenous cultures of Central America, particularly Mexico. Today the plant is found in hot, humid climates, including parts of Texas.

Dosage

To make a tea, add 250 ml (1 cup) boiling water to 1 gram of dried leaves; allow to steep ten to fifteen minutes. Drink three cups per day.

To use in tincture form, take 2-3 ml three times per day. Tablets or capsules may also be used in the amount of 400–800 mg three times per day.

Damiana is not usually used alone; it is believed to be more effective when combined with other herbs of similar or complementary activity.

Safety

Higher doses of damiana may induce a mild sense of euphoria. The leaves have a minor laxative effect, which is more pronounced at higher intakes, and may cause loosening of stools.

DANCING MUSHROOM

Name: Maitake.

Biological Name: Grifola frondosa.

Other Names: Maitake, dancing mushroom, mushroom (maitake).

Parts Used: Fruiting body.

Active Compounds

A common denominator among mushroom and herbal adaptogens is the presence of complex polysaccharides in their structure.

These active components have the unique ability to act as immunomodulators and, as such, are researched for their potential role in cancer and AIDS treatment.

History

Historically, maitake has been used as a tonic and adaptogen. It was used as a food to help promote wellness and vitality.

Traditionally, consumption of the mushroom was thought to prevent high blood pressure and cancer—two applications that have been the focal point of modern research.

Remedies For

Maitake is Useful for

—chemotherapy support
—diabetes
—high cholesterol
—HIV support
—high blood pressure
—high triglycerides
—immune function
—infection

The polysaccharides present in maitake have a unique structure and are among the most powerful to be studied to date.

The primary polysaccharide, beta-D-glucan, is well absorbed when taken orally and is currently under review for the prevention and treatment of cancer, and as a supportive tool for HIV infection. Clinical research with maitake mushroom has increased dramatically in the past several years. In addition to cancer and HIV-infection studies, maitake is also being studied as a potential tool in the management of diabetes, high blood pressure, high cholesterol, and obesity.

Description

Maitake is a very large mushroom (the size of a basketball), which grows deep in the mountains of Northeastern Japan.

Only recently have Japanese farmers succeeded in producing high-quality organic maitake mushrooms, allowing for wider availability both in Japan and the United States.

The fruiting body and the mycelium of maitake are used.

Dosage

Use as food, tea, capsule or tablet. Many people take 3–7 grams of maitake supplements per day.

Safety

Used as recommended, there have been no reports of any side effects with maitake.

We recommend that you contact your doctor before starting any herbal treatment.

DAPHNE GENKWA

Name: Genkwa flower.

Biological Name: Daphnes genkwa Thymelaeceae.

Other Names: Genkwa flower, Daphne genkwa, Yuan hua.

Parts Used: Flower.

Remedies For

Laxative, diuretic, antibacterial, antifungal, antitussive, expectorant, antiparasitic. Drains dampness through the intestines and bladder, soothes cough.

Externally, it is effective for eliminating parasites, such as ringworm and scabies. It is effective for chronic bronchitis.

Dosage

1.5–3 grams used in a powder; Fry the herb with vinegar to reduce its toxicity.

Safety

CAUTION: THIS HERB IS TOXIC; USE WITH EXTREME CAUTION. THIS HERB IS NOT RECOMMENDED FOR USE; IT IS TOXIC—USE OTHER HERBS IN ITS PLACE WHICH ARE NOT TOXIC. DO NOT USE IF YOU ARE PREGNANT OR IF YOU HAVE WEAK CONSTITUTION.

DEVIL'S CLAW

Name: Devil's Claw.

Biological Name: Harpogophytum procumbens.

Other Names: Devil's Claw.

Active Compounds

Devil's claw tuber contains three important constituents belonging to the iridoid glycoside family: harpagoside, harpagide, and procumbide.

The secondary tubers of the herb contain twice as much harpagoside as the primary tubers.

As such, these secondary tubers contain the preferable concentration of active ingredients. Harpagoside and other iridoid glycosides found in the plant may be responsible for the herb's anti-inflammatory and analgesic actions.

However, research has not entirely supported the use of devil's claw in alleviating arthritic pain symptoms.

Devil's claw is also considered by herbalists to be a potent bitter. Bitter principles, like the iridoid glycosides found in devil's claw, stimulate the stomach to increase the production of acid, thereby helping to improve digestion.

History

Numerous tribes native to southern Africa have utilized devil's claw for a wide variety of conditions, ranging from gastrointestinal difficulties to arthritic conditions. Devil's claw has been widely used in Europe as a treatment for arthritis.

Remedies For

Devil's Claw is Useful in

—Indigestion and heartburn

—Rheumatoid arthritis

Description

Devil's Claw is a native plant of southern Africa, especially the Kalahari desert, Namibia, and the island of Madagascar.

The name devil's claw is derived from the herb's unusual fruits, which seem to be covered with numerous small hooks. The secondary storage roots, or tuber, of the plant are employed in herbal supplements.

Dosage

For use as a digestive stimulant, the dose for the powdered secondary tuber is 1.5–2 grams per day. For tincture, the recommended amount is 1–2 ml per day.

For arthritis, many people take 4.5-10 grams per day. Again, recent studies do not support devil's claw as a treatment for arthritis.

Safety

Because devil's claw promotes stomach acid, anyone with gastric or duodenal ulcers should not use the herb.

DEW PLANT

Name: Sundew.

Biological Name: Drosera rotundifolia Droseraceae.

Other Names: Sundew, dew plant, lustwort, round leaved sundew, youthwort.

Parts Used: Entire plant.

Active Compounds

—Naphthaquinones; plumbagin, its methly ether, and methylnaphthazarin

—Flavonoids.

Remedies For

Anti-spasmodic, demulcent, expectorant.

Sundew may be used for bronchitis and whooping cough. The presence of plumbagin has been shown to be active against Streptococcus, Staphylococcus and Pneumococcus bacteria. Sundew will also help with infections in other parts of the respiratory tract.

Its relaxing effect upon involuntary muscles helps in the relief of asthma. It also has a long history in the treatment of stomach ulcers.

Combinations: In the treatment of asthma it may be used with Grindelia and Pill-bearing Spurge.

Description

Grows throughout Europe on wet heaths, moors and sphagnum bogs, especially in Wales.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

DHAI-PHUL

Name: Dhataki.

Biological Name: Woodfordia floribunda, Lythrum fruticosum, Woodfordia fruticosa Lythraceae.

Other Names: Dhataki, Dhai-phul Agnijwala, Tamrapushpi, Tatiri.

Description: This herb is a large shrub found throughout India. Has bright red flowers.

Parts Used: Flowers, leaves.

MEDICINAL APPLICATIONS

Action

—Stimulant, astringent, tonic.

Uses

—diarrhea

—dysentery

—fever

—headache

—hemorrhoids

—herpes

—internal hemorrhage

—leukorrhea

—liver disorders

—menorrhagia

—ulcers

—wounds

Flowers of this herb are used in dysentery and internal hemorrhages, in lucorrhea, and menorrhagia.

Juice of leaves are used in bilious sickness.

Dosage

Infusion, powder.

DHEA

Other Name: Dehydroepiandrosterone.

A Remedy For

—Adrenal insufficiency.

Whether or not DHEA should be taken at all as an unregulated over-the-counter supplement is a controversial issue. There is evidence that DHEA can improve feelings of well-being and increase sexual satisfaction, but only in people whose adrenal glands are functioning poorly. There are also preliminary results indicating that it may have a beneficial effect on some people with major depression.

Much of the controversy arises because DHEA is being promoted as a cure for many other ailments and has taken on the reputation of an antiaging remedy—kind of a modern-day fountain of youth. Advocates claim that it can help you lose weight; boost your sex drive and immune system; fight cancer; enhance your mood, memory, and energy; and reverse the aging process. Some antiaging clinics suggest taking it as early as your 40's or 50's to fight off old age and remain biologically young. Athletes take it in large doses to enhance their performance. However, much of the research behind these claims was done on laboratory animals, and experts caution that the results of such studies cannot be translated to humans. The long-term effects of DHEA supplementation are not known and since it is a powerful hormone, it should be used with great caution and only with your doctor's advice.

What It Is; Why It Works

DHEA is a steroid hormone produced primarily by the adrenal glands. It is the most abundant hormone in the body, with the highest concentrations found in the brain. The only known function of DHEA is as a precursor hormone, meaning that it is a source material which the body converts into other hormones, such as estrogen and testosterone. It peaks in production by the age of 25 and gradually declines until, by age 70, levels may be more than 80 percent below their earlier highs.

Low DHEA levels have been associated with certain diseases, such as Alzheimer's, cancer, diabetes, multiple sclerosis, lupus, and other immune function disorders. For this reason, researchers have been tempted to speculate that supplementation with a synthetic form of DHEA could reverse these diseases, much like hormone replacement therapy reduces some of the symptoms of menopause by returning the hormone balance to a premenopausal state. However, it has not yet been proven that either the diseases or the aging process itself are a result of lowered levels of DHEA, and it is not yet clear whether using DHEA is helpful or, in the long run, harmful.

Despite all this, there are physicians who recommend use of this hormone to treat a variety of ailments or combat the effects of aging. If you decide to try DHEA, find a qualified physician to plan and monitor your course of treatment.

Avoid If...

You have breast, cervical, uterine, or ovarian cancers, or prostate cancer, or if you have a family history of one of these cancers, since they are hormone-related.

Special Cautions

DHEA has been known to cause acne, facial hair growth, and deepening of the voice in some women, and there are reports of breast enlargement in men taking high doses, probably because it triggers hormone production.

Possible Drug Interactions

Check with your doctor about medications that you are taking which may be affected by DHEA.

Special Information if you are Pregnant or Breastfeeding

Because of its hormonal effects, DHEA should not be used during pregnancy or while breastfeeding.

How to Prepare

DHEA is prepared commercially, and is available in capsule, tablet, cream, and spray form in strengths ranging from 5 milligrams to 200 milligrams.

Typical Dosage

The dosage should be determined by your physician following a blood test or saliva test to determine if your current DHEA level is low, and whether that level represents a deficiency in you.

Based on the results, you may be given 5 milligrams to 30 milligrams per day. Your doctor will monitor the level of DHEA in your blood and may adjust the dose as needed.

DILL

Name: Dill.

Biological Name: Anethum graveolens, Umbelliferae.

Other Names: Dill, dilly, garden dill, dill seed, dill fruit.

Parts Used: Seeds.

Active Compounds

—Volatile oil, consisting mainly of carvone with dihydrocarvone, limonene, a- and b-phellandrene, eugenol, anethole, myristicin, carveole, x-pinene.

—*Flavonoids*: Kaempferol and its blucuronide, vicenin.

—Coumarins such as scopoletin, esculetin, bergapten, umbelliferone.

—Xanthone derivatives such as dillanoside.

—Miscellaneous; triterpenes, phenolic acids, protein, fixed oil

Remedies For

Carminative, aromatic, anti-spasmodic, anti-inflammatory, galactogogue, calmative, diuretic, stomachic.

Dill is an excellent remedy for flatulence and the colic that is sometimes associated with it. It is the herb of choice for colic of children. Chewing the seeds will help clear bad breath.

Dill tea, made with water or white wine, is a popular remedy for upset stomach. Dill also helps stimulate appetite, and a decoction of the seed may be helpful for insomnia as well as for pains due to flatulence. Nursing mothers can use dill to promote the flow of milk, particularly in combination with anise, coriander, fennel, and caraway.

Description

Dill is an annual plant widely cultivated as a spice but also found growing wild in North and South America and in Europe. The hollow, finely grooved stem grows 1 to 3 feet high and is striped dark green and white with bluish spots. The leaves are bluish-green, bipinnate with filiform leaflets; the base dilates into a sheath surrounding the stem. Flat, compound umbels of yellow flowers appear from July to September, producing eventually the oval, ribbed dill seeds.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the gently crushed seeds and let infuse for 10–15 minutes. For the treatment of flatulence take a cup before meals.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

DOG POISON

Name: Dog poison.

Biological Name: Aethusa cynapium.

Other Names: Dog poison, fool's cicely, fool's parsley, small hemlock.

Parts Used: The herb.

Remedies For

Antispasmodic, emetic, irritant.

Dog poison is now used only in homeopathic preparations for spasms and for nervous stomach problems.

Description

Dog poison is an annual plant found growing in waste places and gardens, and along hedges and fences, in the north- eastern U.S., eastern Canada, and Europe. The white, spindle-shaped root produces a round, slender, glabrous, blue-flecked, branched stem, 1 to 3 feet high, with alternate, tripinnate leaves. The leaflets are incised, dark green above and shiny yellow-green beneath. White flowers appear from June to September.

Dosage

DO NOT TAKE—POISONOUS.

Safety

POISONOUS—DO NOT USE. GIVEN HERE ONLY FOR IDENTIFICATION.

CAUTION: EATING THE LEAVES OR ROOTS (MISTAKEN FOR PARSLEY OR RADISHES) CAN BE FATAL. DOG POISON LOOKS SIMILAR TO PARSLEY BUT CAN BE DISTINGUISHED BY THE SHINY, YELLOW-GREEN UNDERSIDE OF THE LEAVES (NOT SHINY IN PARSLEY) AND THE WHITE FLOWERS (YELLOW-GREEN IN PARSLEY).

DOG'S COLE

Name: Dog's mercury.

Biological Name: Mercurialis perennis.

Other Names: Dog's cole, perennial mercury, Dog's mercury.

Parts Used: The herb.

Remedies For

Emetic, Purgative: The fresh plant is sometimes used as a laxative. A homeopathic tincture is used for rheumatism and stomach problem.

Description

Dog's mercury is a perennial plant found in waste places in the eastern U.S., having been naturalized from Europe, where it grows especially in shady mountain woods. The round, furrowed, glabrous, branched stem bears opposite, dark green, ovate, serrate, hairy leaves.

The flowers are light green and axillary, the male in spikes, the female solitary or in twos and threes. Flowering time is April and May.

Safety

CAUTION: THE FRESH PLANT IS POISONOUS, AND THE POISON IS BELIEVED TO BE CUMULATIVE IN EFFECT. DO NOT USE.

DRIED BAMBOO SAP

Name: Dried bamboo sap.

Biological Name: Succus bambusae Gramineae.

Other Names: Dried bamboo sap, zhu li.

Parts Used: Dried sap.

Remedies For

Antipyretic, expectorant.

Chinese herbalists use this herb for upper-respiratory infections, which includes symptoms of yellow phlegm.

It is very effective for cough with yellow phlegm that is difficult to expectorate. It is also used for mental imbalances described as invisible phlegm obstructing the heart.

Dosage

30–60 grams; 9–15 grams for coughs. The herb is often taken with ginger juice.

Safety

Dried bamboo sap should not be used for coughs that are associated with cold or by those with spleen deficiency with symptoms such as diarrhea.

DRIED CATKINS

Name: Long Pepper.

Biological Name: Piper longum Piperaceae.

Other Names: Long Pepper, Dried Catkins, Pippali, Pipal, Tippli, Pihal.

Description

This climbing shrub is Indigenous to India and Sri Lanka. It is cultivated in other parts.

Parts Used: Fruit.

MEDICINAL APPLICATIONS

Action

Analgesic, anthelmintic, aphrodisiac, carminative, expectorant.

Uses

—Abdominal tumors

—Asthma

—Bronchitis

—Colds

—Coughs

—Digestion

—Epilepsy

—Flatulence

—Gout

—Laryngitis

—Paralysis

—Rheumatic pain

—Sciatica

—Worms

Seed used in cough and throat pain. Root used in paralysis, epilepsy, and stiff joints.

Both seeds and root are used for cough, rheumatism, leprosy, and consumption. The herb is also believed to improve vitality.

Dosage

Infusion, powder, oil.

Safety

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKEEXCEPTUNDERTHESUPERVISION OF A QUALIFIED PROFESSIONAL.

DURBA

Name: Sacred Creeping Grass.

Biological Name: Eragrostis cynosuriodes Poaceae.

Other Names: Sacred Creeping Grass, Durba, Kusha, Dab, Durva, Kusa.

Description: This herb is found wild throughout the Himalayan ranges.

Parts Used: Grass, root.

MEDICINAL APPLICATIONS

Action

Grass-hemostatic, coagulant, diuretic.

Uses

Decoction of the root is used for dysentery and other bowel complaints, menorrhagia, bleeding disorders like hemorrhoids, purpura, etc.

Dosage

Infusion.

Safety

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

DWARF PALMETTO

Name: Saw Palmetto.

Biological Name: Serenoa repens, Sabal Serrulata.

Other Names: Pan palm, dwarf palmetto, Saw Palmetto, Sabal.

Parts Used: Fruit (berries).

Active Compounds

The lipophilic (fat soluble) extract of saw palmetto provides sterols and the fatty acids caproic, lauric, and palmitic, which reduce the amount of dihydotestosterone in the prostate. The fatty acids in saw palmetto also discourage the actions of inflammatory substances that otherwise contribute to BPH.

Here are the Constituents of Saw Palmetto:

—Essential oil

—Fixed oil, consisting of 25% fatty acids; caproic, lauric, palmitic & 75% neutral fats

—Sterols

—Polysaccharides; galactose, arabinose and uronic acid

History

Earlier this century, saw palmetto berry tea was commonly recommended for benign enlargement of the prostate. It was called the "plant catheter" because of its tonic effect on the neck of the bladder and the prostate. It was also used to treat chronic urinary tract infections. Some believed that the berry increased sperm production and sex drive in men. It was used as an aphrodisiac; women used it to enlarge breasts. Saw Palmetto was most commonly prescribed for frequency of urination and excessive night urination due to inflammation of the bladder and prostate enlargement.

Remedies For

Diuretic, urinary antiseptic, endocrine agent.

Saw Palmetto is a herb that acts to tone and strengthen the male reproductive system. It may be used with safety where a boost to the male sex hormones is required. It is specific in cases of enlarged prostate glands. It will be of value in infections of the genito-urinary tract.

Applications

—Benign prostatic hyperplasia (BPH)

—Thyroid deficiency—preliminary results

—antiseptic, sedative, cardiac, tonic, diuretic

BPH is considered to be caused by testosterone accumulating in the prostate. The testosterone is then converted to dihydrotestosterone (DHT), which causes the cells to multiply too quickly and leads to enlargement of the prostate.

The saw palmetto extract prevents testosterone from converting to dihydrotestosterone. It also inhibits DHT from binding to cellular receptor sites and so increase DHT's breakdown and excretion. In several double blind studies Saw Palmetto extract was an effective treatment for BPH. It was found to be superior to finasteride (Proscar). While Proscar takes up to an year to show some beneficial effects, Saw Palmetto extract showed better results in shorter period of time. Most patients reported obtaining some relief of symptoms within the first 30 days of the treatment with the Saw Palmetto extract. Saw palmetto had no demonstrable effect on the serum prostatic specific antigen levels.

Useful for asthma and all kinds of throat troubles, colds, bronchitis, la grippe, whooping cough, and when the throat is irritated and painful. Especially useful when there is excessive mucous discharge from the sinuses and nose. Valuable in all diseases of the reproductive organs, ovaries, prostate, testes, etc. as well as for Bright's disease and diabetes

Combinations: For debility associated with the reproductive system it will combine well with Damiana and Kola. For the treatment of enlarged prostate glands it may be used with Horsetail and Hydrangea.

Description

Saw palmetto, sometimes referred to as Sabal in Europe, is a native of North America. It is a small palm tree found in West Indies and Atlantic Coast of the United States. The plant grows from 6 to 10 feet high with a crown of large, 2 to 4 foot high, spiny-toothed leaves that form a circular, fan-shaped outline. The olive-like dark purple to black berries grow in bunches, ripening from October to December and is used as an herb. The deep red-brown to black berries are wrinkled, oblong, and 0.5 to 1 inch long with a diameter of 0.5 inch.

Dosage

For early stage BPH, many people take 320 mg per day of saw palmetto herbal extract in capsules or tablets - which are rich in fatty acids, sterols, and esters. It may take 4 to 6 weeks to see results with BPH. If improvements are noted, continue with the dosage.

The powdered dry fruit can also be taken as a tea. Since this is weaker than the herbal extract, 5–6 grams may be taken per day.

Liquid extracts of the whole herb at 5–6 ml per day may also be effective.

Decoction: Put 1/2–1 teaspoonful of the berries in a cup of water, bring to the boil and simmer gently for 5 minutes. This should be drunk three times a day.

Safety

No significant side reactions have been noted in clinical studies with saw palmetto extracts. It is not believed to interfere with accurate measuring of prostate-specific antigen—a marker for prostate cancer. (See a physician for the correct diagnosis of BPH. Do not self treat.)

E

EARLY FLOWERING PERIWINKLE

Name: Periwinkle.

Biological Name: Vinca major, Vinca minor Apocynaceae.

Other Names: Periwinkle, Greater Periwinkle, early flowering periwinkle, lesser periwinkle.

Parts Used: Aerial parts.

Active Compounds: Indole alkaloids, tannins.

Remedies For

Astringent, sedative.

Periwinkle is an excellent all-round astringent that may be used internally or externally. Its main use is in the treatment of excessive menstrual flow, either during the period itself (menorrhagia) or with blood loss between periods (metrorrhagia). As with other remedies that effect the uterus, it can be used to address similar processes in the urinary system. Thus it can be used for cases hematuria. Also used in digestive problems such as colitis or diarrhea where it will act to reduce the loss of fluid or blood whilst toning the membranes. May be used in cases of nose bleed, bleeding gums, mouth ulcers or sore throats.

Combinations: It will combine well with Cranesbill and Agrimony. For menstrual problems it may be used with Beth Root.

Description: Indigenous to Southern Europe.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and let infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

EARTHSMOKE

Name: Fumitory.

Biological Name: Fumaria officinalis Fumariaceae.

Other Names: Fumitory, Earthsmoke.

Parts Used: Aerial parts.

Active Compounds

Isoquinoline alkaloids, including bulbocapnine, canadine, coptisine, corydaline, dicentrine, cryptopine, fumaricine, fumariline, fumaritine, N-methylhydrastine, protopine, sanguinarine, sinactine.

Remedies For

Diuretic, laxative, alterative, hepatic.

Fumitory has long been used in the treatment of skin problems such as eczema and acne. Its action is probably due to a general cleansing mediated via the kidneys and liver. Fumitory may also be used as an eyewash to ease conjunctivitis.

Combinations: Fumitory are often combined with Burdock, Cleavers or Figwort.

Description

Common in Europe and the British Isles, especially in cultivated fields.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and let infuse for 10–15 minutes. This may be drunk freely, but for skin problems it should be drunk at least three times daily.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

ELECAMPANE

Name: Elecampane.

Biological Name: Inula helenium Compositae.

Other Names: Elecampane, Yellow Starwort, Elfdock, elfwort, horse-elder, horseheal, scabwort.

Parts Used: Rhizome.

Active Compounds

Volatile oil, containing sesquiterpene lactones, mainly alamtolactone (= helenalin or elecampane camphor), isoalantolactone and their dihydro derivatives, alantic acid and azulene Inulin, Miscellaneous; sterols, resin etc.

Remedies For

Expectorant, anti-tussive, diaphoretic, hepatic, anti-microbial. Elecampane is a specific for irritating bronchial coughs, especially in children. It may be used wherever there is copious catarrh formed *e.g.*, in bronchitis or emphysema.

The mucilage has a relaxing effect accompanied by the stimulation of the essential oils. It may be used in asthma and bronchitic asthma. Elecampane has been used in the treatment of tuberculosis. The bitter principle makes it useful also to stimulate digestion and appetite. Elecampane tea is much used to quiet coughing, to stimulate digestion and to tone the stomach; for bronchitis, urinary and respiratory tract inflammation, and menstrual problems. Elecampane oil is used for respiratory and intestinal catarrh, chronic diarrhea, chronic bronchitis, and whooping cough.

The decoction or tincture is used for worms, and externally as a wash or fomentation for skin problems such as scabies and itches.

Combinations: Elecampane combines well with White Horehound, Coltsfoot, Pleurisy Root, Lungwort and Yarrow for respiratory problems.

Description

This herb is indigenous to Europe and

temperate Asia, naturalized in the USA, and cultivated widely in Europe and also China.

Elecampane is a perennial plant. The fibrous, top-shaped rootstock is brown outside and white inside. The stout, round stem is coarse and woolly, 3 to 6 feet high, and bears large, alternate, ovate, serrate, olive-colored leaves with white veins. The large, yellow flower heads are solitary or grow in paniculate clusters from July to September. The fruit is a brown, quadrangular achene.

Dosage

Infusion: Pour a cup of cold water onto 1 teaspoonful of the shredded root. Let stand for 8 to 10 hours. Heat up and take very hot three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Fluid Extract: Take 20 to 40 drops, three or more times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

ELECAMPANE FLOWER

Name: Inula flower.

Biological Name: Inula japonica Compositae.

Other Names: Inula flower, elecampane flower, xuan fu hua.

Parts Used: Flower.

Remedies For

Antinausea, expectorant.

This herb is useful for vomiting and hiccups due to spleen deficiency. It is also valuable for stagnant phlegm conditions where the spleen and stomach are deficient, causing rebellious movement of fluids manifesting as coughing and wheezing.

Dosage

3–9 grams.

Safety

Inula flower should be avoided by those with tuberculosis or cough due to wind heat.

ENGLISH IVY

Latin Name: Hedera helix.

Other Names: Common Ivy, Gum Ivy, True Ivy, Woodbind.

A Remedy For

—Bronchitis

—Cough

Ivy has also been used, without proof of effectiveness, for a variety of other disorders. It has been taken internally for liver, spleen, and gallbladder disorders, gout, rheumatism, and inflamed lymph nodes. Externally, it has been used for ulcers, inflammation, burns, calluses, parasites, nerve pain, and inflamed veins.

What It Is; Why It Works

Despite its name, English Ivy is found throughout most temperate regions of the world. It is a creeping or climbing vine that can grow up to 45 feet long. The berries and leaves have a bitter taste. The plant has an ancient history; it was highly regarded by the Greeks and Romans, who used its leaves in poets' laurels. Ivy was dedicated to Bacchus, the god of wine, and was often tied to the brow to prevent intoxication. As a direct outgrowth of that belief, English taverns used to display the sign of an Ivy bush over the door. Ivy is also used to decorate houses and churches at Christmas, although the practice was condemned by the early church as a pagan tradition.

English Ivy relieves bronchial spasms and has an expectorant action, helping to bring up phlegm.

Avoid If...

No known medical conditions preclude the use English Ivy.

Special Cautions

When used at standard dosage levels, English Ivy presents no problems. However, some people develop allergic skin reactions to the leaves.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

English Ivy can be taken as a crushed herb or a tea. The fresh leaves are used externally.

To prepare the tea, steep 1 heaping teaspoon of English Ivy in one-quarter cup of boiling water, then strain.

For external use, fresh leaves may be laid on festering wounds and burns. To prepare a soothing compress for rheumatism, boil 7 ounces of fresh leaves in 1 quart of water and allow to cool.

Typical Dosage

The customary oral dosage of the crushed herb is 300 to 800 milligrams per day. Ivy tea may be taken 3 times daily.

ENGLISH OAK

Latin Name: Quercus robur.

Other Name: Tanner's Bark.

A Remedy For

—Bronchitis

—Colds

—Cough

—Diarrhea

—Fever

—Skin inflammation

—Sore throat

—Tendency to infection

What It Is; Why It Works

English Oak has an anti-inflammatory effect, and also acts as an astringent, tightening and drying the tissues. The dried bark is the primary medicinal agent.

The English Oak grows very slowly, but to massive size. The tree is about 160 feet high with a broad, irregular, heavily branched crown and a trunk that divides into gnarled, strong, bent branches. The bark is deeply fissured, thick and gray-brown. Oak bark from this and other species yields dye shades ranging from yellow to black. The tree is widespread in Europe, Asia Minor, and the Caucasus region. The oak has been held sacred by many cultures including the Druids, Greeks, and Romans. The Round Table of the King Arthur legend was made from a single disk of oak.

Avoid If...

Do not use English Oak in whole-body baths if you have large, weeping skin inflammations or injuries, a fever or infectious illness, or a weak heart. Do not apply English Oak over large skin injuries.

Special Cautions

When taken at customary dosage levels, English Oak poses no serious risks. However, when taken internally, it sometimes causes digestive problems.

Possible Drug Interactions

English Oak can interfere with the absorption of a variety of alkaline substances, including morphine, quinine, nicotine, and caffeine.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

English Oak can be made into a tea. Place 1 gram (one-third teaspoonful) of finely cut or coarse, powdered English Oak in cold water, bring the water to a rapid boil, then strain.

For external use in a rinse, compress, or gargle, mix 20 grams (about 2 tablespoonfuls) of English Oak with 1 quart of water. To prepare a bath additive, pour 1 quart of boiling water over 5 grams (about 12/3 teaspoonfuls) of English Oak, then add to bath water.

Typical Dosage

For internal use, the usual daily dosage is 3 grams (about 1 teaspoonful) of finely cut or coarse powdered English Oak. English Oak is occasionally included in tea mixtures, and in standardized preparations for digestive complaints. You may also find commercial bark extracts available for external use.

ENGLISH PLANTAIN

Latin Name: Plantago lanceolata.

Other Names: Buckhorn, Chimney-sweeps, Headsman, Ribwort, Ripplegrass, Soldier's Herb.

A Remedy For

—Bronchitis

—Colds

—Cough

—Fever

—Skin inflammation

—Sore throat

—Tendency to infection

—Wounds and burns

English Plantain is used primarily for inflammation of the upper respiratory tract. In folk medicine, it has been used to stop bleeding.

What It Is; Why It Works

With a brush-like flower and pronounced ribs on the leaves, this 20-inch plant is widespread in the cool temperate regions of the world. The liquid extract and the pressed juice of the fresh plant exhibit proven antibacterial properties, as well as a tightening, astringent action.

Avoid If...

There are no known medical conditions that preclude the use of English Plantain.

Special Cautions

At standard dosages, use of this herb poses no problems.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To make a tea, pour boiling water over 2 to 4 grams (about one-half teaspoonful) of chopped herb, or put the herb in cold water and bring to a boil. Steep for 10 minutes, then strain. English Plantain is also used in liquid extract, lozenge, and syrup form, and in many cough medications.

Typical Dosage

English Plantain can be taken orally or applied externally. The usual oral dosage is 3 to 6 grams (one-half to 1 heaping teaspoonful) daily.

EPHEDRA (MA HUANG)

Latin Name: Ephedra sinica.

A Remedy For

—Bronchitis

—Cough

Ephedra is taken for mild respiratory disorders, including asthma, in adults and children over the age of 6. It is also used as a stimulant for the heart and for stimulation in general. In Asian medicine, the herb is taken for fever, swelling, and bone pain.

What It Is; Why It Works

Ephedra's value for respiratory problems derives from the calming effect it has on spasms in the bronchial walls. At the same time, Ephedra stimulates the nervous system, and boosts the rate and strength of heart contractions. It also tends to discourage the growth of bacteria.

Ephedra's effects have been known for over 4000 years. The drug is well known in China, where it goes by the name Tsaopen-Ma Huang. Its active ingredient, ephedrine, is the main component in the familiar asthma remedy, Primatene Tablets. The drug is very potent and, because of its effect on the heart, can be very dangerous when taken in excessive amounts. Ephedra grows mainly in Mongolia and the bordering area of China. The young branches and dried roots are the medicinal parts of the plant.

Avoid If...

Do not take Ephedra if you have high blood pressure, high pressure in the eyes (glaucoma), weakened blood vessels in the brain, prostate cancer, an overactive adrenal gland, or a thyroid disorder. In general, avoid Ephedra if you have any condition that makes you anxious or restless.

Special Cautions

Ephedra has numerous possible side effects including sleeplessness, restlessness, irritability, headache, nausea, vomiting, urinary disorders, and rapid heartbeat. Higher doses can trigger a sharp rise in blood pressure and disrupt the rhythm of the heart. Extended use can lead to tolerance and dependence, so that ever larger doses are required to obtain an effect. Because of these dangers, you should only take Ephedra for short periods.

Possible Drug Interactions

Combining Ephedra with a variety of other medications can lead to potentially serious problems.

For example, when taken in combination with heart drugs such as digitalis or digoxin (Lanoxin), Ephedra is more likely to disturb the rhythm of the heart. Combining Ephedra with the blood pressure medication guanethidine (Ismelin) can dangerously exaggerate the herb's stimulative effects.

A similar problem is possible when Ephedra is combined with drugs classified as MAO inhibitors, such as the antidepressants Nardil and Parnate and the Parkinson's disease medication Eldepryl.

The combination of Ephedra and ergot-based drugs such as migraine remedies Ergomar and Wigraine can result in high blood pressure.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Ephedra is available in crushed herb form, in alcohol solutions (tinctures), and as a liquid extract.

Typical Dosage

Potency of commercial preparations may vary, so be sure to follow the manufacturer's directions. General guidelines for adults are as follows:

Tea: Use 1 to 4 grams of crushed Ephedra; take 3 times daily.

Liquid Extract: 1 to 3 milliliters (about one-quarter to one-half teaspoonful) 3 times daily.

Tincture (1:1): The usual single dose is 5 grams (1 teaspoonful).

Tincture (1:4): 6 to 8 milliliters (about 1 to 11/2 teaspoonfuls) 3 times daily.

Overdosage

Doses of more than 100 grams (about 3 ounces) can be life-threatening. Symptoms of overdose include severe sweating, enlarged pupils, spasms, and increased body temperature. Death results from heart failure and suffocation.

If you suspect an overdose, seek emergency treatment immediately.

ERYNGO

Latin Name: Eryngium campestre.

Other Names: Sea Holly, Sea Holme, Sea Hulver.

A Remedy For

Although this herb has been put to a variety of uses, its effectiveness has never been confirmed. The leaves and blossoms are taken for urinary tract infections, prostate problems, and bronchitis. The root is used for colds, coughs, bronchitis, bladder and kidney stones, kidney pain, kidney and urinary tract inflammation, difficulty urinating, water retention, and skin disorders.

What It Is; Why It Works

Eryngo has been used in medicine since at least the 1st century A.D., when the Greek scholar Dioscorides recommended it as a cure for gas. Indeed, the herb's Latin name is thought to come from the Greek word "eruggarein," meaning to belch. Researchers have found Eryngo leaves to have a mildly diuretic effect, flushing excess water from the body. The root has some minor ability to loosen phlegm and calm spasms. A dwarf perennial bush growing no more than 2 feet high, Eryngo grows in most parts of Europe, and in northern Africa and some parts of North America.

Avoid If...

No known medical conditions preclude the use of Eryngo.

Special Cautions

At customary dosage levels, Eryngo poses no risks.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Eryngo leaf is available in extract form, and the root can be taken as a tea, liquid extract, or alcohol solution (tincture). To make tea from Eryngo root, use 1 level teaspoonful of ground root per cup of boiling water. Allow to steep until cold.

To make an Eryngo root tincture, soak 20 grams of ground root in 80 grams (about one-third cup) of 60% alcohol for a period of 10 days.

Typical Dosage

Eryngo is taken orally. The usual dosage is:

Tea: 3 to 4 cups daily.

Tincture: 50 to 60 drops daily divided into 3 to 4 doses.

Liquid Extract: 2 to 3 grams (about one-half teaspoonful) daily.

ESTRAGON

Name: Tarragon.

Biological Name: Artemisia Oracunculus.

Other Names: Little Dragon, Mugwort, Estragon.

Parts Used: Dried aerial parts of the plant.

Active Compounds

Volatile oil: of complex organization, according to breed, including alpha-pinenes, beta-pinenes, camphene, limonene, linalool, ocimene, myrcene, chavicol methyl ether.

—Flavonoids

—Hydroxycoumarins

—Polyynes

Remedies For

Tarragon is considered to be an appetite stimulant.

Description: The plant is indigenous to Russia (Russian Tarragon) and Mongolia and is cultivated widely.

The plant is a glabrous, 60 to 120 cm high herbaceous perennial. There are numerous stems, which are bushily branched with flowering branches at the top. The leaves are simple, lanceolate-linear, 2 to 10 cm by 2 to 10 mm, thorn-tipped, entire or slightly serrate, and somewhat glossy. It has an aromatic and intense odor.

Dosage

Mode of Administration: Both the fresh and dried plant is used. (Pick tarragon leaves or herbs when in bloom and dry carefully.) This is mostly used as a culinary herb.

Safety

No health hazards or side effects are known when used properly and in therapeutic dosages.

EUPHORBIA KANSUI

Name: Kansui root.

Biological Name: Euphorbiae kansui Euphorbiaceae.

Other Names: Kansui root, Euphorbia kansui, Gan sui.

Parts Used: Root.

Remedies For

Laxative, emetic, anthelmintic, Purges severe fluid accumulation, has a strong laxative action, eliminates intestinal worms. Used for serious edema in the abdomen or for generalized edema.

(Use with caution because of its violent nature.) It might be considered for acute symptoms attendant to liver cirrhosis, hydrothorax, ascites, dysuria, pleurisy, constipation, and inflammation of the lymph glands.

Dosage

1–3 grams in decoction; 0.3–1 gram as a powder (when taken in this form, it should be roasted so as to reduce its toxicity—it can cause vomiting).

Safety

Euphorbia kansui should not be used by pregnant women or by those who are weak.

EUROPEAN RED RASPBERRY

Name: Raspberry.

Biological Name: Rubus idaeus Rosaceae.

Other Names: Raspberry.

Parts Used: Leaves and fruit.

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Active Compounds

Polypeptides.

Flavonoids, mainly glycosides of kaempferol and quercitin.

—Tannins

—Fruit sugar

—Volatile oil

—Pectin

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— Citric acid

— Malic acid

Remedies For

Astringent, tonic, parturient.

Raspberry leaves have a long tradition of use in pregnancy to strengthen and tone the tissue of the womb, assisting contractions and checking any hemorrhage during labor. As an astringent it is useful in a wide range of cases, including diarrhea, leucorrhoea and other loose conditions. Also used for easing of mouth problems such as mouth ulcers, bleeding gums and inflammations. As a gargle it will help sore throats.

Dosage

Infusion: Pour a cup of boiling water onto 2 teaspoonfuls of the dried herb and let infuse for 10–15 minutes. This may be drunk freely.

Tincture: Take 2–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

EUROPEAN SANICLE

Name: European sanicle.

Biological Name: Sanicula europaea.

Other Names: European sanicle, wood sanicle.

Description: European sanicle is a perennial plant commonly found in shady, moist places in the deciduous forests of Europe. The short, woody rootstock produces a naked stem up to 1/2 feet high, as well as the basal, palmately divided, serrate leaves. Small, white to reddish flowers grow in compound umbels from May to July. Later the plant produces a globular fruit with hooked prickles.

Parts Used: Leaves Medicinal Applications.

Action, Astringent, expectorant, styptic.

Uses European sanicle tea helps to relieve mucous congestion in the chest, stomach, and intestines.

As a gargle and- mouthwash, it is good for mouth and throat inflammations and sores. It is sometimes used externally to treat skin eruptions, scrofula, and suppurating wounds. The plant also has a mildly styptic action which makes it helpful for internal hemorrhage

Dosage

Infusion: Steep 2 tsp. in 1/2 cup water for

Minutes: Take ½ cup a day.

Powder: Take 1/4 to 1/2 tsp., three times a day.

EUROPEAN WILLOW

Name: Willow.

Biological Name: Salix spp, Salicaceae.

Other Names: Willow, White Willow, European Willow.

Parts Used: Bark.

Active Compounds: Phenolic glycosides; salicin, picein and triandrin, with esters of salicylic acid and salicyl alcohol, acetylated salicin, salicortin and salireposide.

Miscellaneous: Tannins, catechin, p-coumaric acid and flavonoids.

History

White willow's Latin name is the source of the name for acetylsalicylic acid (aspirin) as well as the parent compound from which aspirin was eventually created. Willow bark was used traditionally for fever, headache, pain, and rheumatic complaints.

Remedies For

Actions: Analgesic, anti-inflammatory, tonic.

Useful for

—bursitis

—fever

—headache (tension)

—osteoarthritis

—rheumatoid arthritis

The glycoside salicin, from which the body can split off salicylic acid, is the basis of the anti-inflammatory and pain-relieving effects of willow. The analgesic actions of willow are typically slow-acting but last longer than standard aspirin products.

The bark is also high in tannins, suggesting that it may be of some use in gastrointestinal conditions. However, excessive use may also cause nausea and diarrhea.

Description: The white willow tree grows primarily in central and southern Europe, although it is also found in North America

Dosage

A white willow tea can be prepared from 1–2 grams of bark boiled in 200 ml of water for ten minutes. Five or more cups of this tea can be drunk per day.

Tincture is also used, commonly in the amount of 1–2 ml three times per day.

Willow extracts standardized for salicin content are also available. The daily intake of salicin is typically 60–120 mg per day.

Safety

Long-term use of willow is not advisable, as it may cause some of the same problems that aspirin does—primarily stomach ulcers. However, willow is much safer than aspirin.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

EVENING PRIMROSE OIL

Latin Name: Oenothera biennis.

Other Names: Fever Plant, King's Cureall, Night Willow-herb, Scabish, Scurvish, Sun Drop.

Remedy For

—Breast pain

—Premenstrual syndrome (PMS)

—Skin inflammation

Although there's little solid evidence in its favor, many advocates say that Evening Primrose Oil eases the symptoms of PMS. It is also said to relieve cyclical breast pain, and in Germany it has been approved as a remedy for the itching, flaking and inflammation of eczema. Claims that it will relieve asthma, arthritis, diabetes, high cholesterol, and attention deficit disorder have never been verified.

What It Is; Why It Works

Evening Primrose Oil is rich in gamma-linolenic acid, a compound that plays a role in the production of prostaglandins. These hormone-like substances sometimes work to reduce inflammation. It is through this anti-inflammatory action that Evening Primrose Oil is thought to work.

It may take as long as three months for the oil to show results. The Evening Primrose plant can be found throughout North America, most of Europe, and parts of Asia.

In Britain, the flowers usually open between 6 and 7 PM, hence the name of the plant. In Germany, it's called "night candle" for the same reason.

In 1992, Oil of Evening Primrose was declared unsafe for human consumption by the Food and Drug Administration, and was, for a while, unavailable in the United States. However, it can now be purchased in capsule form at a variety of outlets.

Avoid If...

No known medical conditions preclude the use of Evening Primrose Oil. However, caution is in order if you suffer from seizures. It's possible that the oil could increase their frequency.

Special Cautions

At customary dosage levels, no side effects have been reported.

Possible Drug Interactions

It's probably best to avoid combining Evening Primrose Oil with antipsychotic medications such as Thorazine and Stelazine.

Special Information if you are Pregnant or Breastfeeding.

No harmful effects are known.

How to Prepare

Evening Primrose Oil is available in 500 and 1300-milligram capsules.

Typical Dosage

The usual dosage for breast pain is a total of 3000 to 4000 milligrams daily, taken in several smaller doses. People typically take double this dosage for eczema. Since potency may vary, follow the manufacturer's directions whenever available.

EYE BALM

Name: Goldenseal.

Biological Name: Hydrastis canadensis.

Other Names: Goldenseal, yellow paint root, orange root, yellow puccoon, ground raspberry, eye root, yellow Indian plant, turmeric root, Ohio curcuma, eye balm, yellow eye, jaundice root.

Parts Used: Dried root and rhizome.

Active Compounds

The two primary alkaloids are hydrastine and berberine, along with smaller amounts of canadine. Berberine, which ranges from 0.5-6.0% of the alkaloids present in goldenseal root and rhizome, has been the most extensively researched.

It appears to have a wide spectrum of antibiotic activity against pathogens, such as Chlamydia species, *E. coli*, Salmonella typhi, and Entomeba histolytica.

History

Goldenseal was used by the American Indians as a treatment for irritations and inflammation of the mucous membranes of the respiratory, digestive, and urinary tracts. It was commonly used topically for skin and eye infections.

Because of its anti-microbial activity, goldenseal has a long history of use for infectious diarrhea, upper respiratory tract infections, and vaginal infections. Goldenseal is often recommended in combination with echinacea for the treatment of colds and flu.

Remedies For

Laxative, tonic, alterative, detergent, opthalmicum, antiperiodic, aperient, diuretic, antiseptic, deobstruent.

Useful for

—Common cold/sore throat

—Crohn's disease

—Recurrent ear infection

—Urinary tract infection

Jethro Kloss describes this herb as "the most wonderful remedies in the entire herb kingdom. It does seem like a cure all after looking at all it can do."

Specifically used for digestive system such as stomach disorders, acute inflammations, liver troubles.

It exerts a special influence on all the mucous membranes and tissues with which it comes in contact.

Excels for open sores, inflammations, eczema, ringworm, erysipelas, skin diseases, nausea during pregnancy. In combination with skullcap and red pepper it will relieve and strengthen the heart.

Excellent remedy for tonsillitis, diphtheria, and other serious throat troubles. Also for chronic catarrh of the intestines and all catarrhal conditions, as well as for improving appetite and digestion.

Description

Goldenseal is native to eastern North America and is cultivated in Oregon and Washington. The dried root and rhizome are used.

Dosage

Most people take 4–6 grams of powdered golden seal root and rhizome supplements per day as tablets or capsules.

For liquid herbal extracts, 4–6 ml are used.

Continuous use should not exceed three weeks, with a break of at least two weeks between use. Golden seal powder as a tea or tincture may soothe a sore throat.

Safety

Taken as recommended, golden seal is generally safe. However, as with all alkaloid-containing plants, high amounts may lead to gastrointestinal distress and possible nervous system effects. Goldenseal is not recommended for pregnant or lactating women.

EYEBRIGHT

Name: Eyebright.

Biological Name: Euphrasia officinalis

Other Names: Eyebright.

Active Compounds

Eyebright is high in iridoid glycosides, flavonoids, and tannins. The plant has astringent properties that probably account for its usefulness as a topical treatment for inflammatory states and its ability to reduce mucous drainage.

History

Eyebright was and continues to be used primarily as a poultice for the topical treatment of eye inflammations, including blepharitis, conjunctivitis, and styes.

A compress made from a decoction of eyebright can give rapid relief from redness, swelling, and visual disturbances in acute and subacute eye infections.

A tea is usually given internally along with the topical treatment. It has also been used for the treatment of eye fatigue and disturbances of vision. In addition, herbalists have recommended eyebright for problems of the respiratory tract, including sinus infections, coughs, and sore throat.

Remedies For

Used for

—Blepharitis (inflammation of the eyelids)

—Conjunctivitis

—Irritated eyes

Description

Euphrasia officinalis has been used to refer to a vast genus containing over 450 species. European wild plants grow in meadows, pastures, and grassy places in Bulgaria, Hungary, and the former Yugoslavia. Eyebright is also grown commercially in Europe. The plant flowers in late summer and autumn. The whole herb is used in commercial preparations.

Dosage

Traditional herbal texts recommend a compress made with 1 tablespoon of the dried herb combined with 0.5 liter of water and boiled for ten minutes.

The undiluted liquid is used as a compress after cooling. This was commonly combined with anti-microbial herbs, such as goldenseal.

The current German monograph on eyebright does not support this application, due to potential bacterial concerns. Internally, eyebright tea, made using the same formula above, can be drunk in the amount of two to three cups per day. Dried herb, as 2–4 grams three times per day, may be taken. The tincture is typically taken in 2–6 ml doses three times per day.

Safety

Due to limited information on the active constituents in eyebright and the need for sterility in substances used topically in the eyes, the traditional use of eyebright as a topical compress currently cannot be recommended. Used internally at the amounts listed above, eyebright is generally safe. However, its safety during pregnancy and lactation has not been proven.

F

FALSE UNICORN

Name: False Unicorn.

Biological Name: Chamaelirium luteum Liliaceae.

Other Names: False Unicorn, Starwort, Helonias Root.

Parts Used: Dried rhizome and root.

Active Compounds

Saponins; the glycosides chamaelirin and helonin, based on diosgenin.

Remedies For

Uterine tonic, diuretic, anthelmintic, anti-inflammatory, emmenagogue.

This herb, used by the North American Indians, is one of the best tonics and strengtheners of the reproductive system that we have. Though primarily used for the female system, it can be equally beneficial for men. It is known to contain precursors of the estrogens. However, it acts in an amphoteric way to normalize function.

The body may use this herb to balance and tone and thus it will aid in apparently opposite situations. Whilst being of help in all uterine problems, it is specifically useful in delayed or absent menstruation. Where ovarian pain occurs, False Unicorn Root may be safely used. It is also indicated to prevent threatened miscarriage and ease vomiting associated with pregnancy. However, large doses will cause nausea and vomiting.

Dosage

Decoction: Put 1–2 teaspoonfuls of the root in a cup of water, bring to boiling and simmer gently for 10–15 minutes. This should be drunk three times a day. For threatened miscarriage it may be drunk copiously.

Tincture: Take 2–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

FANG FENG

Name: Ledebouriella.

Biological Name: Ledebouriellae divaricatae Umbelliferae.

Other Names: Ledebouriella, Fang Feng, siler.

Remedies For

Diaphoretic, antispasmodic, analgesic, antirheumatic, antimicrobial Relieves coldness, wind, pain, spasms associated with coldness. It is used for the common cold or influenza when the symptoms include chills, headache, and body aches. It is also useful for rheumatic pains, especially when the pain seems to move from place to place.

Also used for intestinal spasms and for the treatment of trembling hands and feet. Finally, it is effective for itching skin and allergic rashes.

Dosage

3–9 grams.

Safety

This herb should not be used by those who are weak, those with anemia, or those with heat signs associated with yin deficiency.

FEATHERFEW

Name: Feverfew.

Biological Name: Tanacetum parthenium, Chrysanthemum parthenium.

Other Names: Feverfew, featherfew, featherfoil, febrifuge plant.

Parts Used: Leaves, the herb.

Active Compounds

Feverfew contains a range of compounds known as sesquiterpene lactones. Over 85% of these are a compound called parthenolide. Parthenolide helps prevent excessive clumping of platelets and inhibits the release of certain chemicals, including serotonin and some inflammatory mediators. This may reduce the severity, duration, and frequency of migraine headaches and improve blood vessel tone.

History

Feverfew was mentioned in Greek medical literature as a remedy for inflammation and for menstrual discomforts. Traditional herbalists in Great Britain used it to treat fevers, arthritis, and other aches and pains.

Remedies For

Aperient, carminative, purgative, tonic, emmenagogue.

Useful for

Migraine Headaches : Good for gas, bloating and worms. Feverfew promotes the onset of the menstrual period. Used to treat hysteria and alcoholism with delirium tremens. The flowers act as a purgative.

Description: Grows widely across Europe.

Dosage

Feverfew leaf extracts with at least 0.2% parthenolide content are generally used. Herbal extracts in capsules or tablets providing at least 250 mg of parthenolide per day are taken. It may take four to six weeks before benefits are noticed.

Safety

Taken as recommended, standardized feverfew causes minimal side effects. Minor side effects include gastrointestinal upset and nervousness.

Feverfew is not recommended during pregnancy or lactation and should not be used by children under the age of two years.

FENIGREEK

Name: Fenugreek.

Biological Name: Trigonella foenum-graecum Leguminosae.

Other Names: Greek hay, foenugreek, fenigreek, fenugreek.

Parts Used: Seeds

Active Compounds

The steroidal saponins account for many of the beneficial effects of fenugreek, particularly the inhibition of cholesterol absorption and synthesis. The seeds are rich in dietary fiber, which may be the main reason it can lower blood sugar levels in diabetes.

History

A wide range of uses were found for fenugreek in ancient times. Medicinally it was used for the treatment of wounds, abscesses, arthritis, bronchitis, and digestive problems. Traditional Chinese herbalists used it for kidney problems and conditions affecting the male reproductive tract. Fenugreek was, and re-mains, a food and a spice commonly eaten in many parts of the world.

Remedies For

Mucilaginous, emollient, febrifuge, restorative.

Fenugreek is Useful for

—Atherosclerosis

—Constipation

—Diabetes

—High cholesterol

—Hypertriglyceridemia (high triglycerides)

Description

Although originally from southeastern Europe and western Asia, fenugreek grows today in many parts of the world, including India, northern Africa, and the United States. The seeds of fenugreek contain the most potent medicinal effects of the plant.

Dosage

Due to the somewhat bitter taste of fenugreek seeds, debitterized seeds or encapsulated products are preferred. The typical range of intake is 5–30 grams with each meal or 15–90 grams all at once with one meal.

Safety

Use of more than 100 grams of seeds daily can cause intestinal upset and nausea. Otherwise, fenugreek is extremely safe.

FIELD HOP

Name: Yarrow.

Biological Name: Achillea millefolium Compositae.

Other Names: Yarrow, Milfoil, nosebleed, herb militaris, soldier's woundwort, thousand leaf, thousand seal, field hop, millefolium, old man's pepper, thousand seal, ladies' mantle.

Parts Used: Aerial parts.

Active Compounds

Volatile oil, containing a- and b-pinenes, borneol, bornyl acetate, camphor, caryophyllene, eugenol, farnesene, myrcene, sabinene, salicylic acid, terpineol, thujone and many others, and including the sesquiterpene lactones. Many samples contain high concentrations of azulenes, up to about 50%, including chamazulene and guajazulene.

Sesquiterpene lactones; achillin, achillicin, hydroxyachillin, balchanolide, leucodin, millifin, millifolide and many others.

Alkaloids and bases; betonicine (= achilleine), stachydrine, achiceine, moschatine, trigonelline and others.

Miscellaneous; acetylenes, aldehydes, cyclitols, plant acids etc. The volatile oil, which is rich in sesquiterpene lactones, gives yarrow its anti-inflammatory activity.

Alkamides (which are also found in echinacea) may further reduce inflammation.

History

Traditional herbalists in Europe, China, and India have used yarrow in three broad categories.

—To help stop minor bleeding and to treat wounds.

—To treat inflammation in a number of conditions, especially in the intestinal and female reproductive tracts.

—As a mild sedative.

Remedies For

Diaphoretic, hypotensive, astringent, anti-inflammatory, diuretic, anti-microbial, bitter, hepatic, tonic, alterative, vulnerary.

Useful for

—common cold/sore throat

—indigestion and heartburn

—inflammation

—menstruation, painful (dysmenorrhea)

—minor injuries

Yarrow is one of the best diaphoretic herbs and is a standard remedy for aiding the body to deal with fevers. It lowers blood pressure due to a dilation of the peripheral vessels. It stimulates the digestion and tones the blood vessels. As a urinary antiseptic it is indicated in infections such as cystitis. Used externally it will aid in the healing of wounds. It is considered to be a specific in thrombotic conditions associated with hypertension.

Animal studies have shown that this herb can reduce smooth muscle spasms, which might explain its usefulness in gastrointestinal conditions. The alkaloid obtained from yarrow, known as achilletin, reportedly stops bleeding in animals.

Traditional herbalists recommends this herb for applications such as: hot, dry burning skin, at the beginning of acute asthenic fevers, with suppressed secretion; deficient renal action, with renal or urethral irritation; acute or chronic Bright's disease in its incipient stage. Leucorrhoea with relaxed vaginal walls.

Menorrhagia and amenorrhoea; hemorrhoids with bloody discharge, atonic gastric and intestinal dyspepsia; passive hemorrhages.

In addition he recommends it for the following patholgies: haematuria, uterine hemorrhage, intestinal irritation, leucorrhoea, fevers, ureamia, oedema, tonsillitis, epididymitis.

Combinations: For fevers it will combine well with Elder Flower, Peppermint, Boneset and with Cayenne and Ginger. For raised blood pressure it may be used with Hawthorn, Linden Flowers and European Mistletoe.

Description

This herb grows in Europe, North America, and Asia. It is a hardy herbaceous pungent perennial, 6–24 in. Finely feathered, bright gray-green leaves and flat heads of small white, pink or red flowers midsummer to autumn. Grows in grassy places, including lawns.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk hot three times a day. When feverish it should be drunk hourly.

Tincture: Take 2–4 ml of the tincture three times a day.

Safety

Some people who take yarrow may occasionally develop an allergy or rash. Yarrow might increase sensitivity to sunlight. Yarrow should not be used to treat large, deep, or infected wounds, all of which require medical attention. There are no known reasons to avoid yarrow during pregnancy or lactation. Please note that some herbs are known to react with your medication. Please consult your physician before starting on any herb.

FIG

Latin Name: Ficus carica.

A Remedy For

Figs are taken as a remedy for constipation, although a laxative effect has never been scientifically documented. In Asian medicine, Figs are recommended for infectious diarrhea and intestinal inflammation.

What It Is; Why It Works

The Fig is native to Asia Minor, Syria, and Iran. It is mentioned frequently in the Bible, and was held sacred by the Romans, who believed that Romulus and Remus, the founders of Rome, were suckled beneath the limbs of a Fig tree. By the time of the Roman historian Pliny, the Fig was considered so important that its export was outlawed. Today, it is grown in subtropical regions around the world.

Avoid If...

No known medical conditions preclude the use of the Fig.

Special Cautions

No side effects have been recorded.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Dried Figs may be used.

Typical Dosage

There are no recommendations on record.

Overdosage

No information on overdosage is available.

FISH POISON TREE

Name: Jamaican Dogwood.

Biological Name: Piscidia erythrina Leguminosae.

Other Names: Jamaican Dogwood, Fish Poison Tree.

Parts Used: Stem bark.

Active Compounds

Isoflavones; lisetin, jamaicin, ichthyone, and the rotenoids rotenone, milletone, isomilletone.

Organic acids, including piscidic acid, its mono- and diethyl esters, fukiic acid and its 3-0-methyl ester Miscellaneous; b-sitosterol, tannins.

Remedies For

Nervine, anodyne, anti-spasmodic. Jamaican Dogwood is a powerful sedative, used in its West Indian homeland as a fish poison. Whilst not being poisonous to humans, the given dosage level should not be exceeded.

It is a powerful remedy for the treatment of painful conditions such as neuralgia and migraine.

It can also be used in the relief of ovarian and uterine pain. Its main use is perhaps in insomnia where this is due to nervous tension or pain.

Combinations: For the ease of insomnia it is best combined with Hops & Valerian. For dysmenorrhoea. it may be used with Black Haw.

Description: Found in West Indies and South America.

Dosage

Decoction: Put l teaspoonful of the root in a cup of water, bring to the boil and simmer gently for 10–15 minutes. This should be drunk when needed.

Tincture: Take 1–2 ml of the tincture as needed.

Safety

Do not exceed the dosage recommended. It may be a poison.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

FLAXSEED

Latin Name: Linum usitatissimum.

Other Name: Linseed.

A Remedy For

—Constipation

—Skin Inflammation

Flaxseed is also used to soothe an irritated stomach, intestines, or bladder. It is said to lower cholesterol; and Flaxseed oil is believed by some to have beneficial effects on the heart.

Asian medicine enlists it as a remedy for chest congestion, diarrhea, gonorrhea, and irritation of the urinary canal. However, its effectiveness for these purposes remains unverified.

What It Is; Why It Works

Flaxseed stimulates bowel movements by acting as a swelling agent within the intestines. Animal experiments suggest an ability to reduce cholesterol and blood sugar levels. Some researchers think that lignans in the seeds may have cancer-fighting effects.

Derived from the same plant that supplies linen, Flaxseed has been with us for thousands of years. Archeologists found Flaxseed and linen cloth in the pyramids. Homer's Odyssey mentions flax as the material for sails, and the Bible refers to it frequently.

Flaxseed is cultivated in temperate and tropical regions around the world. Its sky blue flowers open only in the morning. Only the dried seeds and their oil are routinely used for medicinal purposes.

Avoid If...

Do not use Flaxseed if you have a bowel obstruction or any narrowing of the digestive tract; Flaxseed's tendency to swell could lead to a blockage. Also avoid Flaxseed if you have a severe inflammation of the gullet, stomach entrance, or intestine.

Special Cautions

When using Flaxseed as a laxative, be sure to take it with plenty of water to reduce the risk of an intestinal blockage. When taking it for inflammatory bowel conditions, allow it to swell in water before use.

Possible Drug Interactions

Flaxseed may delay absorption of other drugs taken at the same time.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To treat skin inflammations, apply Flaxseed externally. Use 30 to 50 grams (about 2 to 3 tablespoonfuls) of Flaxseed meal in a hot, moist compress.

Flaxseed oil, mixed with limewater, relieves burns and scalds. Flaxseed can also be used to remove a foreign body from the eye. Moisten a single Flaxseed and place it under the eyelid.

The foreign object should stick to the mucous secretion of the seed. When using Flaxseed for inflammatory stomach and bowel conditions, soak 5 to 10 grams of the whole seeds in cold water for 20 to 30 minutes, then pour off the liquid.

Typical Dosage

For Constipation: Take 1 tablespoonful of whole or cracked seeds with 150 milliliters (one-half cup) of water 2 to 3 times daily.

To Lower Cholesterol: Take 35 to 50 grams of crushed seeds daily.

To Promote Coronary Health: Take 1 to 2 tablespoonfuls of Flaxseed oil daily.

For Bowel Inflammation: Take 2 to 4 tablespoonfuls of milled Flaxseed soaked in water.

Overdosage

Large quantities of Flaxseed taken with too little fluid can cause a bowel obstruction.

FORSYTHIA FRUIT

Name: Forsythia fruit.

Biological Name: Forsythiae suspensae Oleaceae.

Other Names: Forsythia fruit, Lian Qiao.

Parts Used: Fruit.

Remedies For

Antibacterial, antiemetic, parasiticide, antipyretic, anti-inflammatory. Forsythia is commonly used for the common cold or influenza. It is also useful for toxic sores, carbuncles, swollen lymph nodes, Forsythia should be considered when there is high fever with thirst and delirium. Forsythia fruit is commonly used for a variety of inflammatory conditions, including colds, sore throat, fevers, influenza, boils, car- buncles, and furuncles, and for the treatment of cancer (especially lung, throat, and breast cancer).

Dosage

3–12 grams.

Safety

Forsythia fruit should not be used by those with weak and cold spleen/stomach conditions or for sores that are already open or are caused by yin deficiency.

FO-TI

Name: Fo-Ti.

Biological Name: Polygonum multiflorum Polygonaceae.

Other Names: He-shou-wu, Fo-Ti.

Active Compounds

The active constituents of fo-ti have yet to be determined. The whole root has been shown to lower cholesterol levels, according to animal and human research, as well as to decrease hardening of the arteries, or atherosclerosis. Other fo-ti research has investigated this herb's role in strong immune function, red blood cell formation, and antibacterial action. The unprocessed roots possess a mild laxative effect.

History

The Chinese common name for fo-ti, he-shou-wu, was the name of a Tang dynasty man whose infertility was supposedly cured by fo-ti; in addition, his long life was attributed to the tonic properties of this herb. Since then, traditional Chinese medicine has used fo-ti to treat premature aging, weakness, vaginal discharges, numerous infectious diseases, angina pectoris, and impotence.

Remedies For

Fo-Ti is used for

—Atherosclerosis

—Constipation

—Fatigue

—High cholesterol

—Immune function

Description

Fo-Ti is a plant native to China, where it continues to be widely grown, It is also grown extensively in Japan and Taiwan. The unprocessed root is sometimes used. However, once it has been boiled in a special liquid made from black beans, it is considered a superior and rather different medicine according to traditional Chinese medicine. The unprocessed root is sometimes called white fo-ti and the processed root red fo-ti.

Dosage

A tea can be made from processed roots by boiling 3–5 grams in 250 ml (1 cup) of water for ten to fifteen minutes. Three or more cups are drunk each day. Fo-ti tablets, each in the amount of 500 mg, are also available. Many people take five tablets three times per day.

Safety

The unprocessed roots may cause mild diarrhea. Some people who are sensitive to fo-ti may develop a skin rash. Very high doses may cause numbness in the arms or legs.

FRENCH LILAC

Name: Goats Rue.

Biological Name: Galega officinalis Papilionaceae.

Other Names: Goats Rue, French Lilac.

Parts Used: Dried aerial parts.

Active Compounds

—Galegine (=isoamyleneguanidine), its 4-hydroxy derivative and peganine.

—Flavonoids

—Saponins

Remedies For

Hypoglycaemic, galactogogue, diuretic, diaphoretic.

Goats Rue is useful for reducing blood sugar levels; thus in the treatment of diabetes mellitus. This must not replace insulin therapy, however, and should occur only under professional supervision. It is also an effective galactagogue, stimulating both the production and flow of milk, and has been shown to increase milk output by up to 50% in some cases. It may also stimulate the development of the mammary glands.

Description

Grows wild in Europe.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried leaves and let infuse for 10–15 minutes. This should be drunk twice a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

FRINGETREE BARK

Name: Fringetree.

Biological Name: Chionanthus virginicus Oleaceae.

Other Names: Fringetree Bark, Old Mans Beard, Snowdrop Tree.

Parts Used: The root bark.

Active Compounds

Phyllyrin, a lignin glycoside, Chionanthin.

Remedies For

Hepatic, cholagogue, alterative, diuretic, tonic, antemetic, laxative.

Fringetree bark may be safely used in all liver problems, especially when they have developed into jaundice. Good for the treatment of gall-bladder inflammation and a valuable part of treating gall-stones. It is a remedy that will aid the liver in general and as such it is often used as part of a wider treatment for the whole body. It is also useful as a gentle and effective laxative.

Combinations: For the treatment of liver and gall-bladder conditions fringetree bark may be used with Barberry, Wahoo or Wild Yam.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the bark and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

FROSTWORT

Latin Name: Helianthemum canadense.

Other Names: Rock-Rose, Sun Rose.

A Remedy For

—Indigestion

—Skin inflammation

Although its use has not been officially recognized, Frostwort is considered effective for the two problems listed above. Homeopathic practitioners also recommend it for skin conditions.

What It Is; Why It Works

A native of the eastern United States, Frostwort is now grown in Europe as well. Its flowers, which bloom twice per season, are bright yellow with large petals.

The medicinal part of the plant is the leaf, which has a tightening, drying effect on the tissues.

Avoid If...

No known medical conditions preclude the use of Frostwort.

Special Cautions

No side effects have been recorded.

Possible Drug Interactions

No drug interactions have been documented.

Special Information if you are Pregnant or Breastfeeding

No information is available.

How to Prepare

Frostwort is administered internally or externally as a liquid extract.

Typical Dosage

Strengths of commercial preparations may vary. Follow the manufacturer's labeling whenever available.

Overdosage

No information is available.

FU HAI SHI

Name: Pumice.

Biological Name: Pumice.

Other Names: Pumice, fu hai shi.

Remedies For

Antipytetic, diuretic, expectorant Chinese herbalists use this herb for urinary stones and infections and when there is yellow, difficult-to-expectorate phlegm. The herb softens hard lymph glands and nodules caused by stagnant phlegm heat.

Dosage

6–15 grams.

Safety

Pumice should not be used for a cough caused by cold and weakness.

FU LING

Name: Poria.

Biological Name: Poriae cocos Polyporaceae.

Other Names: Poria, hoelen, poria cocos, fu ling, fu ling pi, fu shen.

Parts Used: fruiting body, outer peel (fu ling pi).

Remedies For

Diuretic, sedative, lowers blood sugar, tonic. Clears dampness, tonifies the spleen functions, calms the mind. It is used for edema, mucus, urinary imbalances, diarrhea, palpitations, vertigo, restlessness, anxiety, and insomnia. The outer peel can be used for clearing edema. Fu shen mushroom is most effective for calming the spirit.

Dosage

6–15 grams.

Safety

Poria cocos should not be used when there is frequent, copious urination associated with deficiency and coldness.

G

GALANGAL

Latin Name: Alpinia officinarum.

Other Names: Catarrh Root, China Root, Chinese Ginger, Colic Root, India Root.

A Remedy For

—Appetite loss
—Bronchitis
—Colds
—Cough
—Fever
—Indigestion
—Liver and gallbladder problems
—Sore throat
—Tendency to infection

In Asia, this herb is also used for arthritis, diabetes, diarrhea, and difficulty swallowing. However, its effectiveness for these problems has not been confirmed.

What It Is; Why It Works

Galangal has an exotic provenance. The name itself is an Arabic corruption of the Chinese word for ginger. The plant grows in India, Thailand, and southern China, and was probably introduced to the West by Arab or Greek physicians. Galangal has been used as a spice for over 1,000 years. In Russia, it's used as a flavoring for vinegar and the spirit "nastoika."

Galangal has several medicinal actions. It relieves spasms, combats inflammation, and fights bacteria.

Avoid If...

There are no known medical conditions that preclude the use of Galangal.

Special Cautions

No health risks or side effects following proper use of Galangal have been recorded.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Galangal may be used as a powder or drunk as a tea. It is also an ingredient in many so-called "Swedish herb" mixtures.

To make tea, pour boiling water over 0.5 to 1 gram (about one-eighth teaspoonful) of Galangal, steep for 10 minutes, and strain.

Typical Dosage

Drink 1 cup of tea one-half hour before meals. Use a total of 2 to 4 grams of the herb daily.

GAMBOGE

Latin Name: Garcinia hanburyi.

Other Names: Gummigutta, Gutta Gamba, Tom Rong.

A Remedy For

—Constipation

—Indigestion

Although Gamboge seems effective for only the above problems, in Asian medicine it is used for diarrhea, hemorrhoids, inflammations, and ulcers. Homeopathic practitioners also prescribe it for diarrhea.

What It Is; Why It Works

Gamboge is usually combined with other constipation remedies, although it has a strong laxative effect of its own. A 50-foot tree native to Indochina and Sri Lanka, the plant's medicinal value lies in the resin extracted from its trunk. The remedy was first introduced in Europe by the Dutch in the mid 17th century.

Avoid If...

No known medical conditions preclude the use of Gamboge.

Special Cautions

Use with caution: as little as 200 milligrams of the drug can cause abdominal pain, ineffectual straining, and vomiting.

Handle the powdered resin with care; it causes violent sneezing when inhaled.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Gamboge is available in powdered form.

Typical Dosage

There is no standard recommendation. Follow the manufacturer's directions whenever available.

Overdosage

A mere 4 grams (less than a teaspoonful) of this herb has been known to cause fatalities. If you suspect an overdose, seek medical attention immediately.

GARDEN ROSEMARY

Name: Rosemary.

Biological Name: Rosmarinus officinalis.

Other Names: Rosemary, garden rosemary, rosemary plant.

Parts Used: Leaves and twigs.

Active Compounds

Volatile Oil: composed of borneol, camphene, camphor, cineole, limonene, linalool, isobutyl acetate, 3-octanone, terpineol, verbenol etc..

—Flavonoids: apigenin, diosmetin, diosmin, genkwanin, 6-methoxygenkwanin, hispidulin, sinensetin, luteolin and derivatives.

—Rosmarinic acid and other phenolic acids

—Diterpenes such as picrosalvin (= carnosol), carnosolic acid and rosmariquinone

—Miscellaneous; rosmaricine, the triterpenes ursolic acid, oleanolic acid & derivatives.

Remedies For

Carminative, anti-spasmodic, anti-depressive, rubefacient, anti-microbial, emmenagogue, stimulant, cephalic, tonic, astringent, diaphoretic, nervine, aromatic. Rosemary is a circulatory and nervine stimulant, which in addition to the toning and calming effect on the digestion is used where psychological tension is present. Useful for flatulent dyspepsia, headache or depression associated with debility. Externally it may be used to ease muscular pain, sciatica and neuralgia. Acts as a stimulant to both the hair follicles and circulation in the scalp and thus may be helpful in premature baldness. The oil is most effective in this case.

Combinations: For depression it may be used with Skullcap, Kola and Oats.

Description

Native to the Mediterranean region, cultivated widely elsewhere.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse in a covered container for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GARDEN SAGE

Name: Red Sage.

Biological Name: Salvia officinalis Labiateae.

Other Names: Red Sage, Garden Sage, Sage, purple top sage.

Parts Used: Leaves.

Active Compounds

—Volatile oil, containing a and b-thujone as the major components, with cineole, borneol, camphor, 2-methyl-3-methylene-5-heptene and others

—Diterpene bitters; picrosalvin (= carnosol), carnosolic acid and others

—Flavonoids; salvigenin, genkwanin, 6-methoxygendwanin, hispidulin, luteolin

—Phenolic acids; rosmarinic, caffeic, labiatic etc.

—Salviatannin, a condensed catechin.

Remedies For

Carminative, anti-spasmodic, anti-microbial, astringent, anti-inflammatory, sudorific, expectorant, tonic, aromatic, nervine, vermifuge, emmenagogue, diuretic, stimulant, diaphoretic, stomachic, antiseptic. Red Sage is the classic remedy for inflammations of the mouth, throat and tonsils, its volatile oils soothing the mucous membranes.

Used as a mouth wash for inflamed and bleeding gums (gingivitis), inflamed tongue (glossitis) or generalized mouth inflammation (stomatitis). An excellent remedy in mouth ulcers (apthae).

As a gargle it will aid in the treatment of laryngitis, pharyngitis, tonsillitis and quinsy. A valuable carminative used in dyspepsia. It reduces sweating when taken internally and may be used to reduce the production of breast milk. As a compress it promotes the healing of wounds. Red Sage stimulates the muscles of the uterus and so should be avoided during pregnancy. Jethro Kloss calls sage an almost "cure-all—you could never go amiss if you take sage."

Combinations: As a gargle for throat conditions it combines well with Tormentil and Balm of Gilead. In dyspepsia it can be combined with Meadowsweet and Chamomile.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the leaves and let infuse for 10 minutes. This should be drunk three times a day.

Mouthwash: Put 2 teaspoonfuls of the leaves in half a liter (one pint) of water, bring to the boil and let stand, covered, for 15 minutes.

Gargle deeply with the hot tea for 5–10 minutes several times a day.

Tincture: Take 2–4 ml of the tincture three times a day.

Safety

CAUTION: AVOID DURING PREGNANCY.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GARDEN VIOLET

Name: Heartsease.

Biological Name: Viola tricolor Violaceae.

Other Names: Heartsease, Wild Pansy, garden violet, Johnny jumper, stepmother.

Parts Used: Herb.

Active Compounds

—Flavonoids, including violanthin, rutin, violaquercitrin

—Methylsalicylate

—Miscellaneous; mucilage gums, resin, saponin.

Remedies For

Actions: Expectorant, diuretic, anti-inflammatory.

Traditionally used for bronchitis and rheumatism, Heartsease is especially valued remedy for treating skin disease. Used both internally and topically it is good for eczema, psoriasis and acne. It is also helpful in cases of cradlecap in babies.

Employed in treating frequent and painful urination in conditions such as cystitis. Both the salicylates and the rutin contained in the plant are anti-inflammatory; it is used traditionally for treating arthritis. The saponins in the plant account for its expectorant action while its mucilage content soothes the chest.

Heartsease is used to treat a range of respiratory disorders such as bronchitis and whooping cough. Due to the high concentration of rutin in the flowers, this herb may be employed to prevent bruising and broken capillaries, to check the build up of fluid in the tissues and to reduce atherosclerosis and in so doing help reduce blood pressure. Heartsease is mildly laxative.

Description: Very common in the UK.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: 1–2 ml of the tincture 3 times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GARLIC

Name: Garlic.

Biological Name: Allium sativum Liliaceae.

Other Names: Garlic, Lashan, Rasonam, Lashuna Veluthulli, Ugragandha, Mlecchagandha, Lesan.

Description

Garlic is closely related to onion and chives. The largest commercial garlic production is in central California. The bulb is used.

Parts Used: Bulb and oil.

Active Compounds

The sulfur compound allicin, produced by crushing or chewing fresh garlic, in turn produces other sulfur compounds: ajoene, allyl sulfides, and vinyldithiins.

History

Garlic is mentioned in the Bible and the Talmud. Hippocrates, Galen, Pliny the Elder, and Dioscorides all mention the use of garlic for a large number of conditions, including parasites, respiratory problems, poor digestion, and low energy. Its use in China was first mentioned in A.D. 510. Louis Pasteur confirmed the antibacterial action of garlic in 1858.

MEDICINAL APPLICATIONS

Action

Alterative, anthelmintic, antiparasitic, antiseptic, antispasmodic, aphrodisiac, carminative, detoxifier, disinfectant, diuretic, emmenagogue, expectorant, rubefacient, rejuvenative, stimulant, vesicant.

Uses

Garlic is Beneficial in:

—Asthma
—Atherosclerosis
—Blood and lymph cleanser
—Colds and flu
—Colic
—Congestive heart failure
—Convulsions
—Cough
—Edema
—Heart disease
—Hemorrhoids
—High cholesterol
—Hypertension (high blood pressure)
—Hypertriglyceridemia (high triglycerides)
—Hysteria
—Immune function
—Impotence
—Indigestion
—Intermittent claudication
—Nerve and bone tissue rejuvenative
—Paralysis
—Recurrent ear infection
—Rheumatism
—Skin diseases
—T.B.
—Tremor
—Tumors
—Round worms
—Yeast infection

Circulatory Effects: More than 250 publications have shown that garlic supports the cardiovascular system. It may lower cholesterol and triglyceride levels in the blood, inhibit platelet stickiness (aggregation), and increase fibrinolysis-which results in a slowing of blood coagulation. It is mildly antihypertensive and has antioxidant activity.

Note: Garlic only keeps clotting in check, a benefit for persons at risk for cardiovascular disease. It cannot effectively replace stronger anticlotting drugs; its primary value is as a preventive.

Antimicrobial Actions: Garlic has antibacterial, antiviral, and anti-fungal activity' It may work against some intestinal parasites. Garlic appears to have roughly 1% the strength of penicillin against certain types of bacteria. This means it is not a substitute for antibiotics, but it can be considered as a support against some bacterial infections. Candida albicans growth is inhibited by garlic, and garlic has shown long-term benefit for recurrent yeast infections.

Anticancer Actions: Human population studies show that eating garlic regularly reduces the risk of esophageal, stomach, and colon cancer.

This is partly due to garlic's ability to reduce the formation of carcinogenic compounds. Animal and test tube studies also show that garlic, and its sulfur compounds, inhibit the growth of different types of cancer-especially breast and skin tumors.

Miscellaneous: Garlic is often applied to indolent tumors, ulcerated surfaces and wounds. A poultice of the bulb is used for scrofulous sores and ring worm. A clove of Garlic when introduced into the ear passage give relief of ear-ache. It is locally used in sciatica, paralysis and neuralgic pains. Raw Garlic juice is inhaled in whooping cough and pulmonary tuberculosis. The oil in which Garlic has been fried is believed to be a useful liniment for rheumatic pains, nervous diseases like infantile convulsions, scabies and maggot infested wounds.

Garlic is useful for fevers, coughs, flatulence, disorders of the nervous system, agues, dropsical affections, pulmonary phthisis, whooping cough, gangrene of the lung and dilated bronchi.

A decoction of garlic made with milk and water is given in hysteria, flatulence and sciatica. A syrup of garlic is a valuable remedy for asthma, hoarseness, disorders of the chest and lungs. The garlic oil is useful for paralytic and rheumatic affections.

Dosage

Some people chew one whole clove of raw garlic per day. For those who prefer it, odor-controlled, enteric-coated tablets or capsules with standardized allicin potential can be taken at 400-500 mg once or twice per day (providing up to 5,000 mcg of allicin). Alternatively, a tincture of 2–4 ml can be taken three times daily.

Safety

Most people enjoy garlic. However, some individuals who are sensitive to it may experience heartburn and flatulence.

Because of garlic's anti-clotting properties, persons taking anticoagulant drugs should check with their nutritionally oriented doctor before taking garlic.

Those scheduled for surgery should inform their surgeon if they are taking garlic supplements. There are no known contraindications to the use of garlic during pregnancy and lactation.

GARLIC SAGE

Name: Wood Sage.

Biological Name: Teucrium scorodonia.

Other Names: Wood Sage, Garlic Sage.

Parts Used: Entire plant.

Remedies For

Tonic, vermifuge, alterative, diuretic, slightly diaphoretic. Stimulates the appetite. Makes a good external wash to cleanse old sores, indolent ulcers, swellings, and boils in combination with chickweed. Combined with comfrey and ragwort in the form of a poultice, it had been traditionally used for cancer and tumors. Traditionally used for palsy, quinsy, sore throat, colds, fevers, kidney and bladder troubles. Increases urine and menstrual flow.

Dosage

Use 1/2–1 teaspoon of the extract daily.

Safety

No information available. Some of the herbs could react with your medication. Please consult your physician before starting on any herb.

GAURIPHAL

Name: Red Raspberry.

Biological Name: Rubus wallichii.

Other Names: Red Raspberry, Gauriphal, wild red raspberry, reapberry.

Description

Raspberry grows wild in UK. It is also plentiful in the North-West parts of India. It is cultivated in other parts of the world.

Constitution

Raspberry contains a volatile oil, sugar, pectin, citric and malic acids, mineral and coloring matter, some mineral salts and water.

Parts Used: Leaves, fruit

MEDICINAL PROPERTIES

Action

Alterative, anti-emetic, astringent, hemostatic, parturient, purgative, stimulant, stomachic, tonic.

Fruit: Antacid, esculent, laxative, parturient

Uses

Raspberry is cooling in all feverish conditions. Fresh fruit allays thirst better than any fruit, except strawberry. Infusion of raspberry leaves is a remedy for severe laxity of bowels, dysentery, cholera, summer complaints and passive hemorrhage from stomach etc.

Safety

CAUTION: MOST VARIETIES PROMOTE ABORTION EXCEPT AMERICAN RED RASPBERRY. THIS HERB ALSO MAY PROMOTE CONSTIPATION. DO NOT TAKE IF YOU ARE PREGNANT. NO OTHER INFORMATION IS AVAILABLE. DO NOT TAKE WITHOUT THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

GE-GEN

Name: Kudzu.

Biological Name: Pueraria lobata Leguminosae.

Other Names: Kudzu, Ge-gen, kuzu, pueraria.

Parts Used: Roots.

Active Compounds

Kudzu root is high in isoflavones, such as daidzein, as well as isoflavone glycosides, such as daidzin and puerarin. Depending on its growing conditions, the total isoflavone content varies from 1.77–12.0%, with puerarin in the highest concentration, followed by daidzin and daidzein.

History

Kudzu root has been known for centuries in traditional Chinese medicine as ge-gen. The first written mention of the plant as a medicine is in the ancient herbal text of Shen Nong (circa A.D.100). In traditional Chinese medicine, kudzu root is used in prescriptions for the treatment of wei, or "superficial," syndrome (a disease that manifests just under the surface—mild, but with fever), thirst, headache, and stiff neck with pain due to high blood pressure. It is also recommended for allergies, migraine headaches, inadequate measles eruptions in children, and diarrhea It is also used in modern Chinese medicine as a treatment for angina pectoris.

Remedies For

Diaphoretic, antispasmodic, muscle relaxant, antipyretic.

Useful for

—alcohol withdrawal support

—angina

—high blood pressure

Clears wind heat; relieves muscular tension and spasms, especially of the neck and shoulders; vents eruptive skin diseases, such as measles. It is used for fevers caused by heat in colds and influenza and for stiff neck and shoulders. It has some demulcent properties, making it useful for thirst and dryness. It can also be used for many other diverse conditions, ranging from hypertension, dysentery, and colitis to sudden nerve deafness. The flowers have been shown to be effective in lessening the desire for alcohol and thus are used in the treatment of alcoholism.

Description

Kudzu is a coarse, high-climbing, twining, trailing, perennial vine. The huge root, which can grow to the size of a human body, is the source of medicinal preparations used in traditional Chinese medicine and modern herbal products. Kudzu grows in most shaded areas in mountains, fields, along roadsides, thickets, and thin forests, throughout most of China. The root of another Asian species of kudzu, Pueraria thomsonii, is also used for herbal products.

Dosage

9–15 grams per day of kudzu root.

In China, tablets of the standardized root (10 mg of weight per tablet equivalent to 1.5 grams of the crude root) are used for angina pectoris. This would equate to 30–120 mg two to three times per day. Kudzu tincture can be used in the amount of 1–2 ml taken three to five times per day.

Safety

Pueraria should not be used by those with cold in the stomach and excessive sweating. At the dosages recommended above, there have been no reports of kudzu toxicity in humans.

GENDHI

Name: Yam.

Biological Name: Dioscorea bulbifera Dioscoreaceae.

Other Names: Yam, Varahikand, Gendhi, Zamin-kand, Kachil, Nooran.

Description: Found in India.

MEDICINAL APPLICATIONS

Action

Antispasmodic, analgesic, aphrodisiac, diuretic, rejuvenative, tonic.

Uses

—abdominal pain and cramps
—colic
—dysentery
—diarrhea
—impotency
—increases semen, milk, and other hormonal secretions
—senility
—hemorrhoids
—hormonal deficiency
—hysteria
—infertility
—nervous excitability
—syphilis
—to gain weight

Dosage

Decoction, milk decoction, powder, bolus, candy

Safety

CAUTION: GLUCOSIDE IN THE PLANT IS POISONOUS; CREATES EXCESS MUCUS AND CONGESTION. ONLY USE WITH THE ADVICE AND UNDER THE SUPERVISION OF AN AYURVEDIC SPECIALIST.

GENTIANA

Latin Name: Gentiana scabra.

A Remedy For

Gentiana is used by Chinese herbalists as a treatment for hepatitis and other liver disorders, sexually transmitted diseases, vaginal discharge, inflammation of the pelvis, pain and swelling in the genital area, and seizures. Its effectiveness for these problems has not, however, been scientifically verified. Like its European cousin Gentian Root (Gentiana lutea), this herb can also be used as a remedy for indigestion and poor appetite.

What It Is; Why It Works

The Gentian family of herbs contains amarogentin, possibly the most bitter of all known substances. Their extreme bitterness serves to stimulate the taste buds, causing increased production of saliva and digestive juices. Among the oriental varieties of Gentian, Gentiana scabra is the most widely used. A long, thick yellow root, it can be found in Asian markets and in some western-style health food stores. In addition to its digestive action, it is believed to have an antibiotic effect and it is thought to be toxic to the parasite that causes malaria.

Avoid If...

Do not take Gentiana if you have diarrhea, acid indigestion, heartburn, or an ulcer.

Special Cautions

At customary dosage levels, Gentiana poses no risks.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Herbs in the Gentian family are usually taken as an alcohol solution (tincture) or a tea made from the dried, chopped root.

Typical Dosage

Tincture: Before each meal, sip a few drops dissolved in a small glass of water.

Tea: Take 25 milliliters (about 2 tablespoonfuls) 3 to 5 times a day.

GERMAN SARSAPARILLA

Latin Name: Carex arenaria.

Other Names: Red Couchgrass, Red Sedge, Sand Sedge, Sea Sedge.

A Remedy For

German Sarsaparilla is often used to treat colds, fevers, urinary tract infections, and rheumatism, although there is no proof that it's effective. In folk medicine, it enjoys an even wider range of applications—all without clinical validation—including the prevention of gout and the treatment of skin conditions, venereal disease, liver disorders, diabetes, water retention, tuberculosis, gas, cramps, and menstrual irregularity.

What It Is; Why It Works

German Sarsaparilla is the dried underground stem of the sand sedge, a hardy marsh grass found along the North Atlantic and Baltic coasts of Europe. Sand sedge roots form a tight, thick mass that withstands erosion, making it a favored planting on the dikes of Holland and along the east coast of England. Historically, German Sarsaparilla has been used primarily for skin conditions. However, Brazilians take it as snuff and use it to stupefy fish and kill insects. In veterinary medicine, it's given for mange and hoof and mouth disease.

Avoid If...

No known medical conditions preclude the use of German Sarsaparilla.

Special Cautions

There are no risks on record.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To make a tea, use 3 grams (a heaping half teaspoonful) of German Sarsaparilla per cup of boiling water. You can also make a cold solution using 2 teaspoonfuls per cup of water.

Typical Dosage

German Sarsaparilla is taken orally. The usual dosage is:

Hot Tea: 1 cup daily

Cold Solution: 1 cup 2 to 3 times daily

GINKGO

Name: Ginkgo Biloba.

Biological Name: Ginkgo biloba.

Other Names: Maidenhair tree, Ginkgo Biloba.

Parts Used: Leaves.

Active Compounds

The medical benefits of ginkgo biloba extract (GBE) rely on the proper balance of two groups of active components: the ginkgo flavone glycosides and the terpene lactones.

The 24% ginkgo flavone glycoside designation on GBE labels indicates the carefully measured balance of bioflavonoids. These bioflavonoids are primarily responsible for GBE's antioxidant activity and ability to inhibit platelet aggregation (stickiness). These two actions may help GBE prevent circulatory diseases, such as atherosclerosis, and support the brain and central nervous system.

The unique terpene lactone components found in GBE, known as ginkgolides and bilobalide, increase circulation to the brain and other parts of the body as well as exert a protective effect on nerve cells. Ginkgolides may improve circulation and inhibit platelet-activating factor (PAF). Bilobalide protects the cells of the nervous system. Recent animal studies indicate that bilobalide may help regenerate damaged nerve cells.

History

Ginkgo is the oldest living tree species in the world, having survived unchanged in China for over three hundred million years. Charles Darwin called the gingko tree a living fossil. Ginkgo trees, also known as maidenhair trees, are very resistant to viruses, fungi, insects, pollution, and even radiation. In fact, a ginkgo tree was the only plant to survive the atomic bomb dropped on Hiroshima.

The great longevity of the ginkgo has made it a popular ornamental tree in parks and along the streets of U.S. cities. Individual trees can live for more than a thousand years. Medicinal use of ginkgo can be traced back almost 5,000 years in Chinese herbal medicine. It was recommended for respiratory tract ailments as well as memory loss in the elderly. Today, Ginkgo biloba extract is recognized as an invaluable aid in the treatment and prevention of Alzheimer's disease.

Remedies For

—Symptomatic relief of organic brain dysfunction

—Intermittent Claudification

—Vertigo (vascular origin)

—Tinnitus (vascular origin)

It is useful for disturbed brain functions, which result in dizziness, tinnitus, and headache with emotional lability and anxiety. Ginkgo has also been demonstrated to improve concentration and memory deficits as a result of peripheral arterial occlusive disease.

Other Applications:

—Alzheimer's disease

—Atherosclerosis

—Cerebrovascular insufficiency

—Congestive heart failure

—Depression

—Diabetes

—Impotence/infertility (male)

—Intermittent claudication

—Macular degeneration

—Migraine headaches

—Multiple sclerosis

—Raynaud's phenomenon

GBE and Circulation: GBE increases circulation to both the brain and extremities of the body. In addition to inhibiting platelet stickiness, GBE regulates the tone and elasticity of blood vessels. In other words, it makes circulation more efficient. This improvement in circulation efficiency extends to both large vessels (arteries) and smaller vessels (capillaries) in the circulatory system.

Antioxidant Properties: GBE may have antioxidant properties in the brain, retina of the eye, and the cardiovascular system. Its antioxidant activity in the brain and central nervous system may help prevent age-related declines in brain function. GBE's antioxidant activity in the brain is of particular interest. The brain and central nervous system are particularly susceptible to free radical attack. Free radical damage in the brain is widely accepted as being a contributing factor in many disorders associated with aging, including Alzheimer's disease.

Nerve Protection and PAF Inhibition: One of the primary protective effects of the ginkgolides are their ability to inhibit a substance known as platelet-activating factor (PAF). PAF is a mediator released from cells that causes platelets to aggregate (clump together). High amounts of PAF are associated with damage to nerve cells, poor blood flow to the central nervous system, inflammatory conditions, and bronchial constrictions. Much like free radicals, higher PAF levels are also associated with aging. Ginkgolides and bilobalide protect nerve cells in the central nervous system from damage during periods of ischemia (lack of oxygen to tissues in the body). This effect may be supportive for persons who have suffered a stroke.

Anti-Aging Properties: Ginkgo increases blood flow to the brain and has excellent restorative effects on the nervous system. Hundreds of scientific studies, involving tens of thousands of patients, attest to the effectiveness of Ginkgo biloba extract for the many problems associated with cerebral vascular insufficiency and impaired mental performance in elderly patients. The active components of Ginkgo biloba have a profound tonic effect on the mind and body. GBE has been shown to inhibit the reuptake of norepinephrine, serotonin, dopamine, and acetylcholine, important neurotransmitters in the brain. The extract acts as an antioxidant and a nerve cell membrane stabilizer. It also enhances oxygen and glucose utilization and increases blood flow in arteries, veins, and capillaries. Experiments involving learned helplessness and behavioral despair in laboratory animals demonstrated that GBE exhibited some antianxiety and antidepressant activities.

Ginkgo is of Benefit for Many of the Presumed Symptoms of Aging such as:

—Anxiety and depression

—Memory impairment

—Poor concentration, decreased alertness

—Diminished intellectual capacity

—Vertigo, headache

—Tinnitus (ringing in the ears)

—Macular degeneration (the most common cause of blindness in adults)

—Inner ear disturbances (which can cause partial deafness)

—Poor circulation in the extremities

—Impotence due to impaired penile blood flow

Clinical Trials And Proof of Efficacy: In October, 1997 JAMA (Journal of the American Medical Association) published research showing that Ginkgo biloba extract appears to slow Alzheimer's disease.

The randomly assigned, double-blind, placebo-controlled study was performed for one year by neurologist Dr. Pierre L. LeBars and a team of scientists at the New York Institute for Medical Research.

The study found that 27 percent of patients who took 120 mg of ginkgo extract for six months or longer improved their mental functioning, including memory, reasoning, and the ability to learn, compared to only 14 percent of those taking placebo.

The study began with 309 patients aged 45 or older with most suffering from Alzheimer's disease but also some with dementia caused by strokes.

The study showed that ginkgo can stabilize or even improve mental performance in one-third of those who are mildly impaired by Alzheimer's.

German studies have demonstrated that 240 mg of Egb761 (the particular form of Ginkgo biloba extract used in the JAMA study) a day is perhaps more effective than the 120 mg daily dose used in the JAMA study for the treatment of Alzheimer's.

Other studies on ginkgo have appeared in such diverse journals as Lancet, Audiology, and the Journal of Urology. Over 120,000 physicians worldwide write over ten million prescriptions for ginkgo each year, accounting for over five hundred million dollars in sales.

Description

Ginkgo Biloba is the world's oldest living species of tree; individual trees live as long as 1,000 years. The leaves of the tree are used. Ginkgo grows most prominently in the southern and eastern United States and in China.

Dosage

Many people take 120–160 mg of GBE, standardized to contain 6% terpene lactones and 24% flavone glycosides, two to three times per day. Amounts up to 240 mg per day are used by some people with cerebrovascular insufficiency, confusion and memory loss, and resistant depression. GBE may need to be taken for six to eight weeks before desired effects are noticed. Ginkgo may also be taken as a tincture of 0.5 ml three times daily.

Safety

Ginkgo extract is considered relatively safe and remarkably free of side effects when taken as directed. Some people who take extremely large doses may have diarrhea, nausea, vomiting, dizziness, and restlessness.

If this should occur, reduce the dosage. If side effects are severe, discontinue it. Ginkgo biloba extract acts as a blood thinner by inhibiting platelets from clumping together, so it could be unsafe for patients who are taking aspirin or other blood thinners. In Europe, ginkgo extract is prescribed in lower doses (40 mg daily) for patients who are taking aspirin or anticoagulants for circulatory problems.

There are no known contraindications to the use of GBE by pregnant and lactating women. It is important to remember that circulatory conditions in the elderly can involve serious disease. Individuals should seek proper medical care and accurate medical diagnosis prior to self-prescribing GBE.

GLAUBER'S SALT

Name: Glauber's salt.

Biological Name: Sodium sulfate.

Other Names: Sodium sulfate, Glauber's salt, mirabilitum, Mang xiao.

Remedies For

Purgative, anti-inflammatory, diuretic. This substance is used for constipation because of its softening properties, especially for stools that are dry and difficult to void. It is also occasionally used to clear heat associated with sores in the mouth and on the breasts, for which it can be taken internally or applied externally.

Dosage

3–12 grams

Safety

Don't use this substance during pregnancy, menstruation, or the postpartum period. It should also be avoided by those with spleen deficiency and by the elderly.

GLUCOSAMINE

A Remedy For

—Osteoarthritis

Although this natural remedy still inspires controversy, there is increasing evidence that Glucosamine does in fact relieve joint pain and inflammation for many arthritis sufferers, and that it may slow progression of the disease.

Because of its ability to reduce and—in some cases—completely eliminate the pain of osteoarthritis, some physicians and researchers feel Glucosamine might offer similar benefits for people suffering from rheumatoid arthritis, ankylosing spondylitis, spinal disc degeneration, tendinitis, bursitis, and physical injuries to the joints. There is even speculation that it could play a preemptive role, eliminating the development of osteoarthritis in people over 40.

What It Is; Why It Works

Glucosamine is a natural sugar produced by the body and found in certain foods. It plays an important role in the production, maintenance, and repair of cartilage, the white, smooth, rubber-like padding that covers the ends of bones and prevents them from rubbing against each other painfully as we move. It also helps form ligaments, tendons, and nails.

Glucosamine stimulates the production of glycosaminoglycans and proteoglycans, two essential building blocks of cartilage. In most cases, the joints produce sufficient Glucosamine to keep the cartilage in good repair, but if they fail to do so, it dries out, degenerates, cracks, and may even completely wear away. Left unprotected, the joints then become swollen, stiff, inflamed, tender, and painful—the condition known as osteoarthritis,

Advocates believe that by taking artificially synthesized Glucosamine sulfate supplements, osteoarthritis sufferers can "jump start" the natural production of Glucosamine by their own bodies. Combining Glucosamine with chondroitin sulfate is thought to increase its effectiveness.

While Glucosamine has been used to treat osteoarthritis in Europe since the 1980s, its use in the United States has been confined mainly to arthritic animals. However, several scientific studies have recently supported its effectiveness, and its popularity in this country is spreading quickly.

Avoid If...

No known medical conditions preclude the use of Glucosamine.

Special Cautions

Although Glucosamine may relieve your osteoarthritis, other treatments--such as a regular exercise program--remain just as important. If you have this condition, it's wise to keep in touch with your doctor for regular check-ups.

Unlike the potent nonsteroidal anti-inflammatory drugs (NSAIDs) usually prescribed for arthritis, Glucosamine does not produce serious side effects.

You might, however, experience mild symptoms such as diarrhea, heartburn, indigestion, and nausea. Try taking the medication with food if it upsets your stomach (or if you have an ulcer). If this fails to eliminate the symptoms, check with your doctor.

Possible Drug Interactions

Glucosamine sulfate taken alone or in combination with chondroitin does not interfere with NSAIDs, aspirin, or any other anti-inflammatory or analgesic medication. Indeed, there is some evidence that taking this supplement may help people reduce their use of these strong drugs.

Special Information if you are Pregnant or Breastfeeding

Check with your doctor before taking Glucosamine while pregnant or breastfeeding.

How to Prepare

Glucosamine is Available in three forms:

Glucosamine Sulfate: This is considered the preparation of choice for osteoarthritis.

Glucosamine Hydrochloride: This is the least expensive variety. It is used primarily for arthritic animals.

N-acetyl Glucosamine: This form delivers less of the active ingredient to the joints.

Glucosamine sulfate capsules and Glucosamine sulfate/chondroitin combination capsules and tablets can be found in many health food stores and may also be ordered by mail.

Typical Dosage

There is no consensus on the ideal dosage of Glucosamine sulfate. Some doctors recommend 1,000 to 2,000 milligrams per day. Others suggest up to 3,000 mg a day, since they insist it is safe and produces no serious side effects. For those using a combination of chondroitin sulfate and Glucosamine sulfate, the typical dosage recommendation is based on weight:

Less than 120 *Pounds*: 800 milligrams chondroitin, 1,000 milligrams Glucosamine.

120 to 200 pounds: 1,200 milligrams chondroitin, 1,500 milligrams Glucosamine.

More than 200 pounds: 1,600 milligrams chondroitin, 2,000 milligrams Glucosamine. You may adjust your dosage according to your response. If you are overweight or are taking a water pill (diuretic), you may need a larger dose of each supplement. Some people experience pain relief immediately. Nevertheless, it may take anywhere from 8 weeks to 6 months to repair damaged cartilage.

GOLDEN ROD

Name: Golden Rod.

Biological Name: Solidago virgaurea Compositae.

Other Names: Golden Rod.

Parts Used: Dried aerial parts.

Active Compounds

—Saponins based on polygalic acid.

—Clerodane diterpenes, including solidagolactones I–VII and elongatolides C & E.

—Phenolic glucosides, including leicarposide.

—Flavonoids such as rutin and quercitin.

—Miscellaneous; acetylenes, cinnamates, hydroxybenzoates, polysaccharides, phenolic acids and tannins.

Remedies For

Anti-catarrhal, anti-inflammatory, anti-microbial, astringent, diaphoretic, carminative, diuretic. Golden Rod is useful for the treatment of upper respiratory catarrh, whether acute or chronic. It may be used in combination with other herbs in the treatment of influenza. Also used for the treatment of flatulent dyspepsia. As an anti-inflammatory urinary antiseptic, Golden Rod may be used in cystitis, urethritis and the like. It is used to promote the healing of wounds. As a gargle it can be used in laryngitis and pharyngitis.

Combinations: For upper respiratory catarrh Goldenroot is often used with Eyebright, Elder, Echinacea, Poke Root and Wild Indigo.

Description: A common garden and wild plant in Europe.

Dosage

Infusion: Pour a cup of boiling water onto 2–3 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk 3 times a day.

Tincture: Take 2–4 ml 3 times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GOLDENROD

Latin Name: Solidago species.

A Remedy For

—Kidney and bladder stones

—Urinary tract infections

Several species of Goldenrod are used to treat urinary infections and kidney and bladder stones. In folk medicine, the solidago virgaurea species has been especially popular, and has been used to treat such diverse ailments as rheumatism, gout, diabetes, hemorrhoids, enlarged prostate, asthma, internal bleeding, enlarged liver, tuberculosis, mouth and throat infections, and festering wounds. Its effectiveness for these conditions remains unproven. In homeopathic medicine, Goldenrod is used for respiratory conditions and kidney pain.

What It Is; Why It Works Because Goldenrod is a diuretic, drawing water from the body, it is used to flush out the urinary system during infections. It also provides limited action against spasms and inflammation.

The plant is found throughout North America, Europe, and some parts of Asia. For medicinal purposes, the above-ground parts of the plant are gathered during the flowering season and carefully dried. The scientific name "Solidago" comes from the Latin term "solidare," meaning the plant that consolidates or makes whole.

Avoid If...

Do not take Goldenrod if you have chronic kidney disease. Do not use it to flush the urinary tract if you have swelling caused by heart or kidney problems. Special Cautions Goldenrod is unlikely to cause problems when taken at usual dosage levels, but be sure to drink lots of fluids while using it.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Crushed Goldenrod can be made into a tea, using 3 to 5 grams (1 to 2 teaspoonfuls) per 5 ounces of water. Steep for 15 minutes in water heated to just below boiling, then strain. You can have 1 cup, between meals, 2 to 4 times a day.

Typical Dosage

Goldenrod is taken orally as a tea, liquid extract, or alcohol solution (tincture). The usual dosage is:

Tea: A total of 6 to 12 grams (2 to 4 teaspoonfuls) of crushed herb daily

Liquid Extract: 0.5 to 2 milliliters 3 times daily

Tincture: 0.5 to 1 milliliter 3 times daily

Store protected from light and moisture.

GRAPE SEED EXTRACT

Latin Name: Vitis vinifera.

A Remedy For

—Poor circulation in the veins

Grape Seed Extract shows great promise as a treatment for poor circulation in the legs (peripheral venous insufficiency). In a study of over 4,700 women with this condition, four out of five experienced improvement after taking 150 milligrams of this preparation twice a day for three months. Their legs felt lighter; did not burn, prickle, or tingle as much; and were less swollen and blue. They also had fewer leg cramps at night.

What It Is; Why It Works

Proanthocyanidin, a compound found in grape seeds, strengthens the tiny blood vessels called capillaries, preventing leakage and reducing swelling in nearby tissues. It also helps prevent unstable oxygen molecules called free radicals from getting out of control and doing harm to the body. This antioxidant effect serves to reduce the buildup of the so-called "bad cholesterol" that clogs the arteries and leads to stroke and heart attacks. The extract's antioxidant properties may also discourage the growth of tumors.

There's at least some reason to believe that proanthocyanidin can also protect the liver from damage by the popular pain-killer acetaminophen, improve vision in older adults, boost heart function, reduce swelling after surgery; and even promote hair growth. However, all of these possibilities await final verification. Native to southern Europe and western Asia, grape vines are now grown in all temperate regions of the world. The leaves, fruit, and juice have all been used medicinally, but only Grape Seed Extract has exhibited pronounced therapeutic effects.

Avoid if...

No known medical conditions preclude the use of Grape Seed Extract.

Special Cautions

Grape Seed Extract poses no problems when taken at normal dosage levels.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful side effects are known.

How to Prepare

Grape Seed Extract is available commercially in capsule and tablet form.

Typical Dosage

The daily dosage for treatment of poor circulation ranges from 150 to 600 milligrams, taken in two or more smaller doses. For preventive therapy, daily doses of 50 milligrams are sometimes recommended.

GRAPEFRUIT

Name: Grapefruit.

Scientific Name: Citrus paradisi.

Family: Rutaceae.

Grapefruit is believed to be native to Jamaica. It is sometimes confused with the pomelo (Citrus maxima), which is a close relation but is larger and pear-shaped.

The grapefruit tree can grow to a height of 26 to 30 feet. Grapefruits are round, with a diameter of between 4 and 6 inches. Their thin skin may be either completely yellow or yellow with a pinkish hue.

The pulp of the fruit may be yellow, pinkish, or reddish. It can be more or less sharp-tasting, acidic, sweet, and fragrant. The United States is the largest producer of grapefruit, accounting for over 40% of global production. Approximately 60% of the grapefruit crop is used for the manufacture of juice and canned grapefruit, while the rest is sold fresh.

Buying: Choose grapefruits that are heavy for their size, quite firm, with tight and shiny skin. Avoid overly soft fruits with dull-colored skin.

Benefits

—High in vitamin C and potassium.

—A good source of folate, iron, calcium, and other minerals.

—Pink and red varieties are high in beta carotene, a precursor of vitamin A.

—High in fiber, low in calories.

—Contain bioflavonoids and other plant chemicals that protect against cancer and heart disease.

Nutrition

Nutritional Information per 100 g

Water	91%
Protein	0.6 g
Fat	0.1 g
Carbohydrates	8 g
Fiber	0.6 g
Calories	30 to 33

The nutritional value of the grapefruit varies with the color (white, pink, or red). Red and pink grapefruits have a higher amount of vitamin A.

Half a grapefruit provides more than 50 percent of the adult Recommended Dietary Allowance (RDA) of vitamin C; it also has 325 mg of potassium, 25 mcg (micrograms) of folate, 40 mg of calcium, and 1 mg of iron.

The pink and red varieties are high in beta carotene, an antioxidant that the body converts to vitamin A. A cup of unsweetened grapefruit juice has 95 mg of vitamin C, more than 150 percent of the RDA, and most of the other nutrients found in the fresh fruit.

Medicinal Value

Grapefruit stimulates the appetite and is used for its digestive, stomachic, antiseptic, tonic, and diuretic qualities.

Grapefruit and Weight Loss Diets

Over the years a number of people have promoted the grapefruit as possessing a unique ability to burn away fat. People following grapefruit diets lose weight because they eat little else-a practice that can lead to nutritional deficiencies. Grapefruits, however, are a good food to include in a sensible weight-loss diet; a serving contains less than 100 calories, and its high-fiber content satisfies hunger. If you're trying to lose weight, make grapefruit your first course to help prevent overeating. It's also an ideal snack food.

Grapefruit and Cholesterol Control

Grapefruits are especially high in pectin, a soluble fiber that helps lower blood cholesterol.

Grapefruit for Cancer Control

Recent studies indicate that grapefruits contain substances that are useful in preventing several diseases. Pink and red grapefruits are high in lycopene, an antioxidant that appears to lower the risk of prostate cancer.

Researchers have not yet identified lycopene's mechanism of action, but a 6-year Harvard study involving 48,000 doctors and other health professionals has linked 10 servings of lycopene-rich foods a week with a 50 percent reduction in prostate cancer.

Other protective plant chemicals found in grapefruits include phenolic acid, which inhibits the formation of cancer-causing nitrosamines; limonoids, terpenes, and monoterpenes, which induce the production of enzymes that help prevent cancer; and bioflavonoids, which inhibit the action of hormones that promote tumor growth.

Other Uses of Grapefruit

Some people with rheumatoid arthritis, lupus, and other inflammatory disorders find that eating grapefruit daily seems to alleviate their symptoms. This is thought to stem from plant chemicals that block Prostaglandins, substances that cause inflammation.

Safety

People who are allergic to citrus fruits are likely to react to grapefruits, too. The sensitivity may be to the fruit itself or to an oil in the peel.

Interactions With Drugs and Medicines

Grapefruit has serious interactions with many commonly prescribed medications. Grapefruit juice inhibits a special enzyme in the intestines that is responsible for the natural breakdown and absorption of many medications. When the action of this enzyme is blocked, the blood levels of these medications increase, which can lead to toxic side effects from the medications.

Grapefruit juice research has suggested that flavonoids and/or furanocoumarin compounds are the substances that act to block the enzyme in the intestines that normally metabolizes many drugs.

The grapefruit juice-drug interaction can lead to unpredictable and hazardous levels of certain important drugs. These medications should not be consumed with grapefruit juice unless advised by a doctor:

Statins (Cholesterol Lowering Drugs)

—Baycol (Cerivastatin)

—Mevacor (Lovastatin)

—Lipitor (Atorvastatin)

—Zocor (Simvastatin)

Antihistamines:

—Ebastine

—Seldane (Terfenadine, taken off the U.S. market)

Calcium Channel Blockers (Blood Pressure Drugs):

—Nimotop (Nimodipine)

—Nitrendipine

—Plendil (Felodipine)

— Pranidipine

—Sular (Nisoldipine)

Psychiatric Medications:

—Buspar (Buspirone)

—Halcion (Triazolam)

—Tegretol (Carbamazepine)

—Valium (Diazepam)

—Versed (Midazolam)

Intestinal Medications:

—Propulsid (Cisapride, taken off the U.S. market)

Immune Suppressants:

—Neoral (Cyclosporine)

—Prograf (Tacrolimus)

—Pain Medications:

—Methadone

Impotence Drug:

Viagra (Sildenafil) Toxic blood levels of these medications can occur when patients taking them consume grapefruit juice. The high blood levels of the medications can cause damage to organs or impair their normal function, which can be dangerous.

The following drugs may potentially have interactions with grapefruit juice, but this potential has not been scientifically studied. Use caution:

—Amiodarone (CordaroneÒ)

—Cilostazol (PletalÒ)

—Donepezil (AriceptÒ)

—Losartan (CozaarÒ)

—Montelukast (SingulairÒ)

—Pimozide (OrapÒ)

—Quetiapine (SeroquelÒ)

—Sildenafil (ViagraÒ)

—Tamoxifen (NolvadexÒ)

—Tamsulosin (FlomaxÒ)

GRAVEL ROOT

Name: Gravel Root.

Biological Name: Eupatorium purpureum Compositae.

Other Names: Gravel Root, Gravelweed, Joe-Pye Weed, Queen of the Meadow, purple boneset, trumpet weed, kidney root.

Parts Used: Rhizome and root.

Active Compound

—Volatile oil, of unknown composition

—Flavonoids, including euparin

—Resin

Remedies For

Diuretic, anti-lithic, anti-rheumatic, stimulant, tonic, astringent, relaxant. Gravel Root is used primarily for kidney stones or gravel. In urinary infections such as cystitis and urethritis it may be used with benefit, whilst it can also play a useful role in a systemic treatment of rheumatism and gout.

Combinations: For kidney stones or gravel it combines well with Stone Root, Parsley Piert, Pellitory of the Wall or Hydrangea.

Description: Found in the USA.

Dosage

Decoction: Put 1 teaspoonful of the herb in a cup of water, bring to the boil and simmer for 10 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GREATER BURNET

Latin Name: Sanguisorba officinalis.

Other Name: Garden Burnet.

A Remedy For

—Menopausal disorders.

Greater Burnet is taken internally to treat female disorders, such as heavy menstrual flow and hot flashes during menopause. It also is used in the treatment of intestinal inflammation, diarrhea, difficulty urinating, hemorrhoids, inflammation of leg veins, and varicose veins. In Asian medicine, it's considered a remedy for infectious diarrhea, nosebleed, and coughing up of blood. Applied externally, it is used to treat wounds and boils, but its effectiveness for this purpose has not been scientifically confirmed.

What It Is; Why It Works

Greater Burnet was formerly in great demand to stop bleeding from wounds. In fact, its Latin name comes from "sanguis," for blood and "sorbeo," for stanch.

Although it is still used as a remedy for bleeding, its effectiveness against the symptoms of menopause is more widely accepted. There have been no investigations into its exact mode of action. The plant is widespread in the northern temperate regions of Europe, Asia, and North America.

In addition to its medicinal applications, it is used as a vegetable and added to salads.

Avoid If...

No known medical conditions preclude the use of Greater Burnet.

Special Cautions

No risks or side effects are known.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Greater Burnet may be taken as a ground herb, extract, juice, or tea.

Typical Dosage

There are no formal guidelines on record.

Overdosage

No information is available on overdosage.

GREEN TEA

Name: Green Tea.

Biological Name: Camellia sinensis.

Other Names: Green Tea.

Active Compounds

Green tea contains volatile oils, vitamins, minerals, and caffeine, but the active constituents are polyphenols, particularly the catechin called epigallocatechin gallate (EGCG). The polyphenols are believed to be responsible for most of green tea's roles in promoting good health.

Research demonstrates that green tea guards against cardiovascular disease in many ways. Green tea lowers total cholesterol levels and improves the cholesterol profile (the ratio of LDL cholesterol to HDL cholesterol), reduces platelet aggregation, and lowers blood pressure. The polyphenols in green tea have also been shown to lessen the risk of several types of cancers, stimulate the production of several immune system cells, and have antibacterial properties-even against the bacteria that cause dental plaque.

History

According to Chinese legend, tea was discovered accidentally by an emperor 4,000 years ago. Since then, traditional Chinese medicine has recommended green tea for headaches, body aches and pains, digestion, depression, immune enhancement, detoxification, as an energizer, and to prolong life. Modern research has confirmed many of these health benefits.

Remedies For

Green tea is Useful for:

—Cancer risk reduction

—Gingivitis (periodontal disease)

—High cholesterol

—Hypertension (high blood pressure)

—Hypertriglyceridemia (high triglycerides)

—Immune function

—Infection

Most of the studies of the effect of the green tea have been focused on its cancer-causing and cancer-protecting aspects. Green tea polyphenols are potent antioxidant compounds. They are more potent antioxidants than vitamin E and vitamin C.

Green tea may also increase the activity of the antioxidant enzyme. A number of animal studies have shown that green tea polyphenols may offer significant protection from cancer. It is believed that they do so by blocking the formation of cancer-causing compounds such as nitrosamines, suppressing the activation of carcinogens, and detoxifying or trapping cancer causing agents.

Green tea is believed to have the greatest effect on cancers of the gastrointestinal tract such as stomach, small intestine, pancreas, and colon; lung cancer; and estrogen related cancers including most breast cancers.

It is interesting to note that green tea prevents cancer, whereas black tea increases the risk of certain cancers such as cancer of the rectum, gallbladder, and endometrium.

Description

All teas (green. black, and oolong) are derived from the same tea plant, Camellia sinensis. The difference is in how the plucked leaves are prepared.

The tea plant has long been cultivated in China. It is an evergreen shrub or tree that can grow to a height of 30 feet, but is usually maintained at a height of 2 to 3 feet by regular pruning. The hairy leaves of the tea plant are used both as a social and medicinal beverage. The parts used are the leaf bud and the two adjacent young leaves together with the stem, broken between the second and the third leaf. Older leaves are considered inferior in quality.

Green tea, unlike black and oolong tea, is not fermented, so the active constituents remain unaltered in the herb. It is produced by lightly steaming the fresh cut leaf. Green tea is very high in polyphenols with potent antioxidant and anticancer properties.

Dosage

Much of the research documenting the health benefits of green tea is based on the amount of green tea typically drunk in Asian countries-about three cups per day (providing 240–320 mg of polyphenols).

To brew green tea, 1 teaspoon of green tea leaves are combined with 250 ml (1 cup) of boiling water and steeped for three minutes. Tablets and capsules containing standardized extracts of polyphenols, particularly EGCG, are available; some are decaffeinated and provide up to 97% polyphenol content-which is equivalent to drinking four cups of tea.

Safety

Green tea is extremely safe. The most common adverse effect reported from consuming large amounts of green tea is insomnia, anxiety, and other symptoms caused by the caffeine content in the herb.

GRIFOLA

Name: Polyporus.

Biological Name: Polypori · umbellati Polyporaceae.

Other Names: Polyporus, grifola, zhu ling.

Parts Used: Fruiting body.

Remedies For

Diuretic, lowers blood sugar, antibacterial, antitumor. Polyporus is diuretic and anti-inflammatory. It clears edema, heat, genitourinary infections, cystitis, urinary retention, diarrhea, and vaginal discharge. It has also recently been used by Chinese herbalists in cancer treatment, as it has antitumor properties.

Dosage

6–15 grams.

Safety

Polyporus should not be used when there is an absence of dampness.

GRINDELIA

Name: Grindelia.

Biological Name: Grindelia spp. Compositae.

Other Names: Grindelia, Gum Plant, Gum Weed, Tar Weed.

Parts Used: Dried aerial parts.

Active Compounds

Diterpenes of the grindelane type, including grindelic acid and its 17-hydroxy derivative, 13-isogrindelic acid, 17-grindeloxygrindelic acid and many others Flavonoids; including acacetin, kumatakenin, quercitin and its 3, 3-dimethyl ether derivative Resins.

Remedies For

Anti-spasmodic, expectorant, hypotensive. Grindelia acts to relax smooth muscles and heart muscles. Useful in the treatment of asthmatic and bronchial conditions, especially where these are associated with a rapid heart beat and nervous response. It may be used in asthma, bronchitis, whooping cough and upper respiratory catarrh. Because of the relaxing effect on the heart and pulse rate, there may be a reduction in blood pressure. Externally the lotion is used in the dermatitis caused by poison ivy.

Combinations: In the treatment of asthmatic conditions it may be used with Lobelia and Pill-bearing Spurge.

Description: Found in the USA and S. America.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GUA LOU

Name: Trichosanthes fruit.

Biological Name: Fructus trichosanthes Cucurbitaceae.

Other Names: Trichosanthes fruit, gua lou.

Parts Used: fruit, seed, peel of the fruit.

Remedies For

Anti-inflammatory, antibiotic, anticancer, expectorant, demulcent.

Helps circulate the lung qi for tight or painful chest obstruction, promotes bowel movement by relaxing and lubricating the intestines.

Useful for hot, difficult-to-expectorate phlegm, possibly accompanied with a stifling sensation in the chest (Stagnant lung qi).

It is also used for swollen glands, boils and carbuncles, and lung and breast abscesses. More recently Chinese herbalists have been using this herb successfully for high blood lipid levels and hypertension.

Description

Various parts of this herb are used for different purposes. The fruit and seed are very similar. However, the seed has more strength for lubricating the intestines, transforming phlegm, and dissolving nodules. The peel of the fruit is more effective in treating the stomach and aiding the circulation of qi.

Dosage

6–18 grams.

Safety

Trichosanthes fruit should not be used by those with coldness and dampness, especially when there is spleen deficiency.

GUA LOU REN (SEED)

Name: Trichosanthes.

Biological Name: Trichosanthes kirilowii Cucurbitaceac.

Other Names: Trichosanthes, gua lou ren (seed), tian hua fen (root).

Parts Used: Seeds, root.

Remedies For

Seed: Expectorant, emollient, mild laxative.

Root: Anti-inflammator.

Seed: This herb is useful for dry stool or mild constipation. It can also be used either internally or externally to help wounds heal.

Root: This herb is used for lung heat conditions when there is both phlegm and dryness. It helps generate fluids evaporated from heat conditions, and aids expectoration. It is helpful for toxicity manifested by inflammation, pus, sores, carbuncles, and especially breast abscesses. It can be used either externally or internally as needed.

Dosage

9–15 grams.

Safety

Trichosanthes seed should not be used when there is diarrhea or when there is no heat. Trichosanthes root should not be used by pregnant women, those without heat, or those with diarrhea.

GUAIAC

Name: Guaiacum.

Biological Name: Guaiacum officinale Zygophyllaceae.

Other Names: Guaiacum, Guaiac, Lignum vitae, pockwood.

Parts Used: The heart-wood.

Active Compounds

—Lignans; furoguaiacidin, guaiacin, furoguaiacin, furoguaiaoxidin

—Resin acids; guaiaretic, hydroguaiaretic, guaiacic and a- and b- guaiaconic acids

—Miscellaneous; vanillin, terpenoids including guaiagutin, guaiasaponin

Remedies For

Anti-rheumatic, anti-inflammatory, laxative, diaphoretic, diuretic.

Guaiacum is useful for rheumatic complaints. It is especially useful where there is much inflammation and pain present. Used in chronic rheumatism and rheumatoid arthritis.

Aids in the treatment of gout and may be used in the prevention of its recurrence. Due to the high content of resins in this herb, care must be taken with patients with gastritis or peptic ulceration.

Combinations: It may be used together with Bogbean, Meadowsweet or Celery Seed.

Description

Guaiac is the resin from a tree that grows in West Indies, Mexico, Central America, and northern south America. The crooked trunk grows 30 to 40 feet high and provides lignum vitae, the olive brown, heavy, very hard wood which contains the oily resin.

Dosage

Decoction: Put 1 teaspoonful of the wood chips in a cup of water, bring to boil and simmer for 15–20 minutes. This should be drunk three times a day.

Tincture: 1–2 ml three times a day.

Safety

Due to the high content of resins in this herb, care must be taken with patients with gastritis or peptic ulceration.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GUAR GUM

Name: Guar gum.

Biological Name: Cyanopsis tetragonoloba.

Other Names: Guar gum.

Parts Used: Ground endosperm of seeds.

History

Guar gum was traditionally used as a bulk laxative. It was also employed as an appetite suppressant and as treatment for diabetes. Guar gum served as a base in cosmetic preparations such as hand lotions and washable creams.

Remedies For

Guar gum is used for

—Reducing serum cholesterol

—Stabilize blood sugar level (diabetes)

Like psyllium, guar gum preparations are found to reduce serum cholesterol levels substantially. It especially reduces LDL (bad) cholesterol. Anywhere from 5 to 17% decrease in cholesterol had been observed when treated with guar gum.

Guar gum stabilizes the blood sugar level. This may be from the guar gum's action of delaying the the absorption of carbohydrates in the gut. It has exhibited an anti-hyperglycemic effect. It also may have anti-hyperlipemic activity.

Description: This was used as a popular laxative in southern Asia. The preparations were found to decrease serum cholesterol. Guar gum tree is native to India and Pakistan. When mixed with water, it forms high viscous colloidal solutions quite rapidly.

GUARANA

Name: Guarana.

Biological Name: Paullinia cupana.

Other Names: Guarana.

Parts Used: Seeds.

Active Compounds

Guaranine (which is nearly identical to caffeine) and the closely related alkaloids theobromine and theophylline make up the primary active agents in guarana. Caffeine's effects (and hence those of guaranine) are well known and include stimulating the central nervous system, increasing metabolic rate, and having a mild diuretic effect. One long-term study found no significant effects on thinking or mental function in humans taking guarana. Caffeine may have adverse effects on the blood vessels and other body systems as well as on a developing fetus, and presumably guaranine would have similar effects. Guarani also contains tannins, which act as astringents and may prevent diarrhea.

History

The indigenous people of the Amazon rain forest used crushed guarana seed as a beverage and a medicine. Besides its refreshing and nutritive value, guarana was said to treat diarrhea, decrease fatigue, reduce hunger, and help arthritis. It also has a history of use in treating hangovers from alcohol abuse and headaches related to menstruation.

The plant was introduced into France by a physician who was returning from Brazil. It came to be employed in the treatment of migraine and nervous headaches, neuralgia, paralysis, urinary tract irritation, and other ailments, as well as continuing to be administered for chronic diarrhea.

Remedies For

Guarana is useful for

—Athletic performance

—Fatigue

—Weight loss and obesity

The medicinal virtues of guarana is probably largely due to its high caffeine content. It has 2.5 times more caffeine than from coffee. This may be one of the reasons for its effectiveness in reducing migraine headaches. The tannins act as an astringent to alleviate diarrhea. Guarana extracts were found to inhibit platelet aggregation following either oral or intravenous administration.

Description

The vast majority of guarana is grown in a small area in northern Brazil. Guarana gum or paste is derived from the seeds and is used in herbal supplements.

Dosage

A cup of guarana, prepared by adding 1–2 grams of crushed seed or resin to 250 ml (1 cup) of water and boiling for ten minutes, can be drunk three times per day. Each cup may provide up to 50 mg of guaranine.

Safety

As with any caffeinated product, guarana may cause insomnia, trembling, anxiety, palpitations, urinary frequency, and hyperactivity. Guarana should be avoided during pregnancy and lactation. Long-term use may cause decreased fertility, cardiovascular disease, and several forms of cancer, according to epidemiological studies of caffeine use.

GUAY-QUILL SARSAPARILLA

Name: Sarsaparilla.

Biological Name: Smilax officinalis Liliaceae.

Other Names: Sarsaparilla, Jamaica sarsaparilla, guay-quill sarsaparilla, red sarsaparilla.

Parts Used: Root and rhizome.

Active Compounds

Saponins, based on the aglycones sarsapogenin and smilagenin; the major one being parillin

(=sarsaponin), with smilasaponin (=smilacin) and sarsaparilloside.

b-sitosterol, stigmasterol and their glucosides.

Remedies For

Alterative, anti-rheumatic, diuretic, diaphoretic, demulcent, antisyphilitic, stimulant, antiscorbutic.

Sarsaparilla is a widely applicable alterative. It may be used to aid proper functioning of the body as a whole and in the correction of problems such as skin and rheumatic conditions. It is particularly useful in scaling skin conditions such as psoriasis, especially where there is much irritation. As part of a wider treatment for chronic rheumatism it is especially useful for rheumatoid arthritis.

Sarsaparilla contains constituents with properties that aid testosterone activity in the body. Traditional herbalists used this herb for syphilis, herpes, rheumatic affections, dropsy, gonorrheal rheumatism, syphilitic sore throats, and for chronic hepatic disorders.

Combinations: For psoriasis it will combine well with Burdock, Yellow Dock and Cleavers.

Description

The plants are climbing vines native to tropical America and the West Indies.

Dosage

Decoction: Pour 1–2 teaspoonfuls of the root in a cup of water, bring to the boil and simmer 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

GUDMAR

Name: Sarpadarushtrika.

Biological Name: Gymnema sylvestre, Asclepias geminata Asclepiadaceae.

Other Names: Sarpadarushtrika, Gudmar Bodaparta, Chakkarakolli, Cherukurinja, Chhota-Dudhilata, Gurmar, Kavali, Merasingi, Meshasringi, Parpatrah, Putla-podra, Shiru-kurunja, Wakandi.

Description

This herb is a climbing plant found in the Himalayas. It is also found in the Central and Southern India.

Parts Used: Roots, leaves.

Constituents

Sun-dried leaves of gymnema sylvestre was analyzed and found to contain: Two resins-one insoluble in alcohol and one soluble in alcohol.).

The resin insoluble in alcohol formed the larger proportion. The resin soluble in alcohol was said to leave a tingling sensation in the throat.

—A new bitter neutral principle
—Albuminous and coloring matters
—Calcium oxalate
—Pararabin
—Glucose
—Carbohydrates
—Tartaric acid

—An organic, acid said to be a glucoside and to possess anti-saccharine property, and called X (formula $C_{32}H_5gO_{12}$).

—Gymnemic acid

—cellulose

—ash

—quercitol

No tannin was found. On further study, when the gymnemic acid was purified and analyzed, it was found not to possess any anti-sacaharine properties; it was not a glucoside.

MEDICINAL PROPERTIES AND USES

Action

Astringent, stomachic, tonic and refrigerar. In Ayurveda the plant has been described as an antiperiodic, stomachic and diuretic.

Uses

This is one of the main herbs used for healing diabetes mellitus. It removes sugar from pancreas, restores pancreatic function; stimulate the circulatory system, increases urine secretion, and activates the uterus.

It is also useful for the treatment of swollen glands, cough, and fever. Indian scientists have performed extensive studies to determine the action of this herb on the sugar metabolism. In a study reported in 1930, Mhaskar & Caius found that the leaves of the herb cause hypoglycemia in experimental animals which sets in soon after the administration either by mouth or by injection.

Based on this observation, they suggested that the drug acts indirectly through stimulation in insulin secretion off the pancreas, as it has no direct action on the carbohydrate metabolism. The leaves are also found to stimulate the heart and circulatory system, increase urine secretion and activate the uterus.

GUGAL

Name: Indian Bedellium.

Biological Name: Balsamodendron mukul, Commiphora mukul, Balsamodendron agollocha, Commiphora africana Burseraceae.

Other Names: Indian Bedellium, Guggula, Gugal, Aphalatana, Bai- jahundana, Duk, Gugal, Gugara, Guggul, Gukkal, Gukkulu, Gum-gugul, Kou-shikaha, Maisatchi Kungiliyam, Maishakshi, Mogla, Mokhil, Mukul, Moql, Rata-dummula, Salaitree.

Description

This herb is found in many parts of India. It exudes a resin. When fresh, this oleo-gum-resin is moist, viscid, fragrant and of a golden color. It burns in fire, melts in the sun, and forms a milky emulsion with hot water. It is very often used as a substitute for the more expensive myrr.

Parts Used: Resin (Gum)

—Constituents

—volatile oil

—gum-resin

—bitter principle

MEDICINAL PROPERTIES

Action

Alterative, analgesic, antispasmodic, aperient, astringent, carminative, demulcent, emmenagogue, expectorant, nervine, rejuvenative, and stimulant. Action and Uses in Ayurveda and Siddha. Tikta kashaya rasam, katu vipaka, vata kapha haram. pitta karam, lagu, saram, dipanam, ruksham, balyam, rasayanam, vrishyam, bhagnasanthana karam. In vranam, apachi, arsas, granthi and in skin diseases.

Action and Uses in Unani

Resolved in piles, cough due to moisture, purgative of balgham. Dries the ruthobath.

Uses

—abscesses
—arthritis
—bronchitis
—enlarged cervical glands
—high cholesterol
—cystitis
—diabetes
—endometriosis
—gout
—hemorrhoids
—indigestion
—leukorrhea
—lumbago
—nervous disorders
—neurosis
—rheumatic disorders
—skin diseases
—tumors
—ulcers

Dosage

Powder, pill.

Safety

Precautions: This herb may cause acute kidney infections and rashes.

Avoid eating sour, sharp indigestible foods when taking this herb.

No other information available. Do not take except under the direct supervision of a qualified professional.

GUGGAL

Name: Guggul.

Biological Name: Commiphora mukul.

Other Names: Gugulipid, Mukul myrrh tree, Gugul Lipid, guggal, guggul.

Description

Guglipid is derived from the mukul myrrh tree, a small thorny tree 4 to 6 feet tall, that is native to Arabia and India. The tree remains without any foliage for most of the year. It has ash colored bark, and comes off in rough flakes, exposing the underbark, which also peels off. The tree exudes a yellowish resin called gum guggul or guggulu, that has a balsamic odor. This resin is used for medicinal purposes.

Parts Used: Gum resin.

Active Compounds

Ketone fraction that is extracted from the resin contains the most potent cholesterol lowering components. This is composed of C_{21} or C_{27} steroids, with the major components being Z- and E-guggulsterone.

Guggul contains resin, volatile oils, and gum. The extract isolates ketonic steroid compounds known as guggulsterones. These compounds have been shown to provide the lipid-lowering actions noted for guggul. Guggul significantly lowers serum triglycerides and cholesterol as well as LDL and VLDL cholesterols (the "bad" cholesterols). At the same time, it raises levels of HDL cholesterol (the "good" cholesterol). Guggul has also been shown to reduce the stickiness of platelets-another effect that lowers the risk of coronary artery disease.

History

Guggul is a highly valued botanical medicine used in Ayurveda, Indian system of medicine. It is used for rheumatoid arthritis, and lipid disorders. The classic Ayurveda medical text, the Sushruta samhita, described in detail the usefulness of this herb for treatment of obesity and other disorders of fat, including "coating and obstruction of channels".

Encouraged by the Ayurvedic description of this herb for lowering cholesterol, scientists have conducted clinical trials to test the effectiveness of this herb in disorders of lipid metabolism and for lowering weight. The research resulted in the development of a natural cholesterol lowering substance that is safer and more effective than many cholesterol-lowering drugs. Gugulipid was granted approval in India for marketing as a lipid lowering drug in 1986.

Remedies For

Key uses

—High cholesterol levels

—High triglyceride levels

Guglipid offers considerable benefit in preventing and treating atherosclerotic vascular disease (Heart disease). It is most effective in lowering LDL cholesterol and triglycerides.It also raises the level of good cholesterol (HDL).

Guggul exhibits a cholesterol lowering ability unlike any other natural substance. In human trials, using gugulipid, the cholesterol levels dropped 14 to 27 percent in a 4 to 12 week period while the triglyceride levels dropped from 22 to 30 percent. This guggul has great effect in preventing heart atherosclerosis, or narrowing of the arteries.

Dosage

Daily recommendations for guggul are typically based on the amount of guggulsterones in the extract. A common intake of guggulsterones is 25 mg three times per day. Most extracts contain 5–10% guggulsterones. For a 5 percent guggulsterone extract, this translates to an effective dose of 500 milligrams three times per day. Many people take the extracts daily for twelve to twenty-four weeks.

Safety

Part of the resin from which the medicinal extract is made is toxic and, hence, the raw resin should not be used for any treatment. Early studies with the crude oleoresin reported numerous side effects, including diarrhea, anorexia, abdominal pain, and skin rash. Modern extracts are more purified, and far fewer side effects `(*e.g.*, mild abdominal discomfort) have been reported with long-term use.

Gugglipid, the standardized extract has better chemical efficacy and is better tolerated by patients. Animal studies indicate that this material is not toxic. It is also believed safe to use during pregnancy. (With your physician's supervision). The extract has not shown any adverse side effects, nor it has affected the liver function, blood sugar control, kidney function, or hematological parameters. Guggul should be used with caution by persons with liver disease and in cases of inflammatory bowel disease and diarrhea. A physician should be consulted for any case of elevated cholesterol and/or triglycerides.

GURMAR

Name: Gymnema.

Biological Name: Gymnema sylvestre.

OtherNames: Gurmarbooti, gurmar, periploca of the woods, meshasringi, Gymnema.

Parts Used: Leaves.

Active Compounds

The hypoglycemic (blood sugar-lowering) effect of gymnema leaves was first documented in the late 1920s. This action is gradual in nature, differing from the rapid effect of many prescription hypo-glycemic drugs.

Gymnema leaves raise insulin levels, according to research in healthy volunteers. The leaves are also noted for lowering serum cholesterol and triglycerides. While studies have shown that a water-soluble acidic fraction of the leaves provides hypoglycemic actions, it is not yet clear what specific constituent in the leaves is responsible for this action.

Some researchers have suggested gymnemic acid as one possible candidates Further research is needed to clearly determine which constituent is responsible for this effect. Gurmarin, another constituent of the leaves, and gymnemic acid have been shown to block sweet taste in humans.

History

Gymnema has been used in India for the treatment of diabetes for over 2,000 years. The primary application was for adult-onset diabetes (NIDDM), a condition for which it continues to be recommended today in India. The leaves were also used for stomach ailments, constipation, water retention, and liver disease.

Remedies For

Useful for the Treatment of

—Diabetes

Description

Gymnema sylvestre is a woody climbing plant that grows in the tropical forests of central and southern India. The leaves are used in herbal medicine preparations.

G. sylvestre is known as "periploca of the woods" in English and mesbasringi (meaning "ram's horn") in Sanskrit. The leaves, when chewed, interfere with the ability to taste sweetness, which explains the Hindi name gurmar-"destroyer of sugar."

Dosage

Recent studies in India have used 400 mg per day of a water-soluble acidic fraction of the gymnema leaves. In adult-onset diabetics, ongoing use for periods as long as eighteen to twenty months has proven successful.

In IDDM (juvenile onset) diabetic patients, a similar amount has been used as an adjunct to ongoing use of insulin. Traditionally, 2–4 grams of the leaf powder per day is used.

Safety

At the amounts suggested, gymnema is generally safe and devoid of side effects. The safety of gymnema during pregnancy and lactation has not yet been determined. Persons with NIDDM should only use gymnema to lower blood sugar under the clinical supervision of a health professional.

Do not use Gymnema in place of insulin to control blood sugar by persons with IDDM or NIDDM (Type 1 or 2 diabetes).

✳ H ✳

HAI ZAO

Name: Sargassum.

Biological Name: Herba sargassii Sargassum.

Other Names: Sargassum, seaweed, hai zao.

Parts Used: Whole plant.

Remedies For

Antifungal, anti-parasitic, antihypertensive, expectorant, diuretic, regulates the thyroid, lowers cholesterol levels.

This herb is used to reduce swollen lymph glands, various lumps, and nodules, especially in the neck, associated with goiter, scrofula, or tuberculosis. It is also used in formulas for fluid retention and as an expectorant. Traditionally, it has been used for hernia pain and pain in the testes.

Dosage

6–15 grams.

Safety

Sargassum should not be used by those with coldness due to spleen and stomach deficiency.

HAR

Name: Myrobalan.

Biological Name: Terminalia chebula, Terminalia reticulata Combretaceae.

Other Names: Myrobalan, Indian Gall Nut, Haritaki, Hardh, Har, Kadukka, the ink tree, harar, harir.

Description: This herb is a tree that grows in many parts of India.

Parts Used: Fruit.

MEDICINAL PROPERTIES

Action

Rejuvenative, tonic, astringent, laxative, nervine, expectorant, anthelmintic, alterative

Uses

The fruit from this herb is among the "triphala" (combination of three herbs) of Ayurveda. It is useful in asthma, sore throat, vomiting, eye diseases, heart diseases, hiccup, etc.

Dosage

Decoction, powder, paste, gargle.

Safety

Do not take this herb if you are pregnant or if you are suffering from dehydration, severe exhaustion, and emaciation. No other information about the safety of this herb is available. Use caution. Ayurvedic herbs are often taken in combination to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

HARDHACK

Name: Stone Root.

Biological Name: Collinsonia canadensis Labiatae.

Other Names: Stone Root, hardhack, horseweed, heal-all, knob grass, knob root, richweed.

Parts Used: Root and rhizome.

Active Compounds

—Essential oil

—Tannins

—Saponins

—Alkaloid

—Resins

—Organic acid

Remedies For

Anti-lithic, diuretic, diaphoretic. Stone Root is used mainly in the treatment and prevention of stone and gravel in the urinary system and the gall-bladder. It can be used as a prophylactic but is also excellent when the body is in need of help in passing stones of gravel. It is also a strong diuretic. Traditional herbalists have used stone root for hemorrhoids, catarrhal gastritis, pain in the rectum, heart tonic, rheumatic inflammation, laryngitis, pharyngitis, clergyman's sore throat, dysentery, ulcers, fistula, inflammation of the middle ear, acute cystitis, and vaginismus.

Combinations: For urinary stone and gravel, it may be combined with Parsley Piert, Gravel Root, Pellitory of the Wall or Hydrangea.

Description: Native of Canada.

Dosage

Decoction: Put 1–2 teaspoonfuls of the dried root in a cup of water, bring to boiling and simmer for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

HARJORI

Name: Velvet Leaf.

Biological Name: Cissampelos pareira.

Other Names: Velvet Leaf, Laghu Pata, Jal Jamni, Patha, Harjori.

Description: This herb is found in India and Sri Lanka.

Parts Used: Root, bark, leaves.

MEDICINAL APPLICATIONS

Action

Diuretic, lithotriptic, stomachic, bitter tonic.

Uses

—bladder diseases

—Bright's Disease

—diarrhea

—dysentery

—edema

—fever

—indigestion

—kidney inflammation

—urinary diseases

Remedies incorporating this herb:

—Laghu Pata Remedy for colic

—This Ayurvedic remedy is often prescribed for colic.

Dosage

Decoction, powder, extract.

Safety

No information about the safety of this herb is available.

USE CAUTION. AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

HARONGA

Latin Name: Haronga madagascariensis.

A Remedy For

—Appetite loss

—Indigestion

—Liver and gallbladder problems

What It Is; Why It Works

Used historically as a remedy for dysentery, Haronga is a small evergreen tree that grows up to 24 feet in height. It comes from Madagascar and east Africa and is widely distributed throughout tropical Africa.

Haronga's leaves and bark are used medicinally. They have been shown to stimulate digestive juices and kill certain bacteria. In animal tests, they have exhibited a protective effect on the liver.

Avoid If...

Do not use Haronga if you have a severe pancreas or liver disorder, gallstones, obstruction of the bile ducts, or other gallbladder problems.

Special Cautions

In large doses, Haronga can cause a harmful reaction to light. At typical dosage levels, however, this problem is unlikely.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Haronga leaves and bark are air-dried after collection. The medication is supplied in dry extract form.

Typical Dosage

The average dose of the dry extract is 7.5 to 15 milligrams daily.

Overdosage

No information on overdosage is available.

HAW

Name: Hawthorn.

Biological Name: Crataegus oxyacantha.

Other Names: Hawthorne, haw, May bush, May tree, May blossom, mayflower, quickset, thorn-apple tree, whitethorn, Hawthorn.

Parts Used: Flowers, leaves, fruits.

Active Compounds: The leaves, flowers, and berries of hawthorn contain a variety of bioflavonoid-like complexes that appear to be primarily responsible for the cardiac actions of the plant.

Bioflavonoids found in Hawthorn include oligomeric procyanidins (OPCc), vitexin, quercetin, and hyperoside. The action of these compounds on the cardiovascular system has led to the development of leaf and flower extracts.

History

Dioscorides, a Greek Herbalist, used Hawthorn in the first century A.D. It went out fashion as a medicine until the 19th century, when an Irish physician included them in a secret remedy for heart disease. Years later, the medicine was found to be made from hawthorn berries, which are still prescribed in folk medicine for a variety of heart-related problems - among them high blood pressure and over-rapid heartbeat.

Remedies For

—Angina pectoris

—Atherosclerosis

—Congestive heart failure

—Hypertension (high blood pressure)

—Antispasmodic, cardiac, sedative, vasodilator

This herb is very good when treating either high or low blood pressure by strengthening the action of the heart. Helps many blood pressure problems. The tea is good for nervous tension and sleeplessness Heart Disease: Hawthorn may help the heart in several ways. It may open (dilate) the coronary arteries, improving the heart's blood supply. It may increase the heart's pumping force. It may eliminate some types of heart-rhythm disturbances (arrhythmias). It may help limit the amount of cholesterol deposited on artery walls.

In Germany, three dozen hawthorn based heart medicines are available. It has become one of the most widely used heart remedies. It is prescribed by German physicians to normalize heart rhythm, reduce the likelihood and severity of angina attacks, and prevent cardiac complications in elderly patients with influenza and pneumonia. Please be advised that hawthorn takes some time to take effect.

For short term solutions, conventional drugs such as nitroglycerin is still the choice. You should never try to treat heart diseases yourself. Take the advise from a physician.

Description

The hawthorn grows as either a shrub or a tree in England and continental Europe. It is widely grown as a hedge plant. Its trunk or stem have hard wood, smooth and ash-gray bark, and thorny branches. The small, shiny leaves are dark green on top, light bluish green underneath, and have three irregularly toothed lobes. The white flowers have round petals and grow in terminal corymbs during May and June. The fruit or haw is a 2 to 3 seeded, scarlet on the outside, yellowish and pulpy on the inside.

Dosage

Hawthorn extracts standardized for total bioflavonoid content (usually 2.2%) or oligomeric procyanidins (usually 18.75%) are often used. Many people take 80–300 mg of the herbal extract in capsules or tablets two to three times per day or a tincture of 4–5 ml three times daily. If traditional berry preparations are used, the recommendation is at least 4–5 grams per day. Hawthorn may take one to two months for maximum effect and should be considered a long term therapy. German physicians prescribe 1 teaspoon of hawthorn tincture upon waking and before bed for periods of up to several weeks. To mask its bitter taste, mix with sugar, honey, or lemon, or mix it into an herbal beverage blend.

For an infusion, use 2 teaspoons of crushed leaves or fruits per cup of boiling water. Steep 20 minutes. Drink up to 2 cups per day.

Safety

Safe for long term use. There are no known interactions with prescription cardiac medications or other drugs. There are no known contraindications to its use during pregnancy or lactation. Large amounts of hawthorn may cause sedation and/or a significant drop in blood pressure, possibly resulting in faintness.

FDA lists hawthorn as a herb of "undefined safety".

HAWKWEED

Name: Mouse Ear.

Biological Name: Pilosella officinarum Compositae

Other Names: Mouse Ear, Hawkweed

Parts Used: Aerial parts.

Active Compounds:

—Umbelliferone, a coumarin

—Flavonoids including leteolin and its glycosides

—Caffeic and chlorogenic acids

Remedies For

Anti-spasmodic, expectorant, anti-catarrhal, astringent, sialagogue, vulnerary.

Mouse Ear, named after the shape of the leaf, is one of the ancient traditional herbs of England and Wales. Used for respiratory problems where there is a lot of mucus being formed with soreness and even possible coughing of blood. It is considered a specific in cases of whooping cough. Beneficial in bronchitis or bronchitic asthma. Externally it may be used as a poultice to aid wound healing or specifically to treat hernia and fractures.

Combinations: For whooping cough it may be used with Sundew, White Horehound, Mullein or Coltsfoot.

Description: A common European plant growing in sandy soil.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

HAZEL ALDER

Name: Smooth Alder.

Biological Name: Alnus serrulata.

Other Names: Hazel alder, smooth alder.

Parts Used: Bark, leaves.

Remedies For

—Astringent, bitter, emetic, haemostatic

—Fresh alder bark will cause vomiting, so use dried bark except for emetic purposes.

A decoction of the bark makes a good gargle for sore throat and pharyngitis. The powdered bark and the leaves have been used as an internal astringent and tonic, and the bark also as an internal and external haemostatic against hemorrhage. Boiling the inner bark in vinegar produces a useful external wash for lice and for skin problems such as scabies and scabs. It can be used to clean your teeth.

Description

Smooth alder is a shrub or tree with blackish bark that is lightly speckled with small, grayish to orange lenticels. Its leaves are elliptic to obovate, finely serrate and usually fine-haired underneath. It can be found from Nova Scotia to Oklahoma, Florida, and Louisiana.

Dosage

Decoction: Boil 1 tsp. bark or leaves in 1 cup water. For internal use, take 1 to 2 cups a day, in mouthful doses.

Tincture: A dose is from 1/2 to 1 tsp.

Powder: A dose is from 8 to 12 grains.

Safety: No information is available.

HAZELNUT

Name: Witch Hazel.

Biological Name: Hamamelis virginiana Hamameliadaceae.

Other Names: Witch Hazel, winter bloom, striped alder, spotted alder, hazelnut, snapping hazel, pistachio, tobacco wood.

Parts Used: Bark or leaves.

Active Compounds

Leaves: Tannins, composed mainly of gallotannins with some condensed catechins and proanthocyanin. Miscellaneous; flavonoids; quercitin, kaempferol, astragalin, myricitrin, volatile oil containing hexenol, n-hexen-2-al, a- and b-ionones.

Bark: Tannins, mainly the a-, b-and g-hamamelitannins, with some condensed tannins such as d-gallocatechin, l-epigallocatechin and l-epicatechin.

Miscellaneous: Saponins, volatile oil, resin.

Remedies For

Astringent, anti-inflammatory, tonic, antiphlogistic, sedative, styptic.

Witch Hazel is the most applicable and easy to use astringent for common usage. Very valuable for stopping either internal or external bleeding.

It is especially useful in the easing of hemorrhoids. Also used for the treatment of bruises and inflamed swellings, and varicose veins. Witch Hazel will control diarrhea and aid in the easing of dysentery.

Combinations: For the easing of hemorrhoids it will combine well with Pilewort.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried leaves and let infuse for 10–15 minutes. This should be drunk three times a day. Ointment: Witch Hazel can be made into an excellent ointment.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

HEATHER

Latin Name: Calluna vulgaris.

Other Name: Ling.

A Remedy For

Heather is sometimes recommended for prostate symptoms and other urinary problems, although proof of its effectiveness remains insufficient.

In folk medicine it is also used, without substantiation, for ailments of the kidneys and lower urinary tract, digestive disorders, cramps, diarrhea, liver and gallbladder disease, gout, rheumatism, respiratory complaints, insomnia, agitation, and wounds.

What It Is; Why It Works

Heather is thought to have a diuretic, flushing action that promotes urination. It is also believed to stimulate the flow of bile and inhibit the growth of germs, but none of these effects has been scientifically documented.

The many varieties of this dwarf, flowering shrub can be found across most of Europe, Russia, and Asia Minor, as well as on the Atlantic coast of North America. The entire above-ground part of the plant is considered medicinal.

Avoid If...

No known medical conditions preclude the use of Heather.

Special Cautions

At customary dosage levels, Heather poses no risks.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To make a tea, combine 1.5 grams (about one-third teaspoonful) of crushed Heather with 1 cup of water and boil for 3 minutes. The herb can also be used in a bath; combine 500 grams (about 2 cups) of Heather with a few quarts of water. Boil, strain, and add to bath water. A liquid extract is also available.

Typical Dosage

Tea: 3 cups daily between meals

Liquid Extract: 1 to 2 teaspoons daily

Store Heather in well dried, sealed containers.

Overdosage

No information on overdosage is available.

HEMP NETTLE

Latin Name: Galeopsis segetum.

A Remedy For

—Bronchitis

—Cough

In folk medicine, Hemp Nettle has also been used to treat lung conditions and flush excess fluid from the body, but its effectiveness for such problems has not been scientifically established.

What It Is; Why It Works

Hemp Nettle is found in southern and central Europe. The plant grows 3 feet high, with large pale yellow flowers that are said to resemble a weasel's face. Its medicinal value lies in its ability to loosen phlegm. It also has an astringent, tightening effect on the tissues.

Avoid If...

There are no known medical conditions that preclude the use of Hemp Nettle.

Special Cautions

At customary dosage levels, Hemp Nettle poses no known danger.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To prepare a tea, pour boiling water over 2 grams (less than one-half teaspoonful) of crushed Hemp Nettle, steep for 5 minutes, then strain. The tea may be sweetened with honey.

Typical Dosage

Take the tea several times a day. The usual total daily dosage is 6 grams of the crush herb.

HENBANE

Latin Name: Hyoscyamus niger.

Other Names: Devil's Eye, Hogbean, Poison Tobacco, Stinking Nightshade.

A Remedy For

Liver and gallbladder problems Only Henbane leaf has been deemed effective—and only for liver and gallbladder problems.

However, the leaf is also taken for stomach and intestinal cramps, toothache, whooping cough, painful ulcers, and tumors, and oil from the leaf is used as a treatment for scar tissue. Henbane seed was once used as a vapor treatment for asthma and toothache.

In Asian medicine, Henbane leaf is considered a remedy for vaginal discharge, meningitis, scabies, and involuntary discharge of sperm, while the seed is used for epilepsy, toothache, and eye inflammation.

In homeopathic medicine, Henbane is prescribed for nervous conditions and stomach problems.

What It Is; Why It Works

Henbane contains hyoscyamine, the active ingredient in certain prescription drugs for spasms and cramps, including Cytospaz and Urised. Henbane fights cramps by relaxing the smooth muscles that line the internal organs, especially those in the digestive tract. It also relieves muscle tremors and has a calming effect. Henbane has been known for its wine-like sedative properties since the time of the ancient Greeks. Mentioned by Shakespeare, Marlowe, Gower, and Spenser, it is also one of the best known herbs in English literature. Still, it has never enjoyed much popularity as a medicine, perhaps because of its unpleasant side effects. Native to Europe and nearby regions of Asia and Africa, it now grows throughout the northern hemisphere.

Despite the sound of it, the name "Henbane" has no connection with poultry. Instead, it is a corruption of the 11th century Anglo-Saxon "Belene" or "Henbell," a reference to the bell-shaped flowers of the plant.

Avoid If...

Do not take Henbane if you suffer from rapid heartbeat, prostate cancer, glaucoma, fluid in the lungs, narrowing of the stomach or intestinal passages, or an enlarged colon.

Special Cautions

Use Henbane with great care; high doses are poisonous. Side effects, which become more likely as the dosage is increased, include impaired distance vision, heat build-up due to reduced sweating, and severe constipation.

Possible Drug Interactions

Henbane leaf can increase the severity of side effects from a number of prescription drugs. Be cautious about combining Henbane with any of the following:

—Amantadine (Symmetrel)

—Antidepressants in the tricyclic category, including Elavil, Tofranil-PM, and Triavil

—Antihistamines such as Benadryl

—Drugs classified as MAO inhibitors, including the antidepressants Nardil and Parnate and the Parkinson's disease medication Eldepryl

—Haloperidol (Haldol)

—Major tranquilizers in the phenothiazine category, including Compazine, Stelazine, and Thorazine

—Procainamide (Procanbid)

—Quinidine (Quinaglute, Quinidex)

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Remedies usually are made from standardized Henbane powder.

Typical Dosage

The usual dose is 0.5 grams of standardized Henbane powder. Take no more than 3 grams per day.

Overdosage

A massive overdose poses the threat of suffocation, and can be lethal. The four warning signs of overdose are reddened skin, dry mouth, enlarged pupils, and a fast, irregular heartbeat. Early feelings of sleepiness are followed by restlessness, hallucinations, delirium, and hyperactivity, finally ending in exhaustion and sleep.

Severe poisonings are usually the result of recreational misuse of this herb. If you suspect an overdose, seek emergency medical assistance immediately.

HIBISCUS

Latin Name: Hibiscus sabdariffa.

Other Names: Guinea Sorrel, Jamaica Sorrel, Red Sorrel, Roselle.

A Remedy For

Hibiscus flower is sometimes recommended for indigestion and loss of appetite, although its effectiveness for these problems has not been verified. Also unsubstantiated is its use as a remedy for colds, respiratory inflammation, phlegm, constipation, water retention, and circulation disorders.

What It Is; Why It Works

As herbal remedies go, Hibiscus is quite new to the scene. It wasn't until the 20th century that it began to appear in herbal tea mixtures. Hibiscus tea does have a laxative effect due to its high content of poorly absorbable fruit acids.

Researchers have also found that extracts of Hibiscus leaf tend to relax the uterus and reduce blood pressure. None of these effects is pronounced enough to have won the herb a major following, however. The Hibiscus plant, a small, bushy annual with spectacular red and yellow blooms, originated near the source of the Niger river in Africa, but is now grown worldwide. Only the blossom is used medicinally.

Avoid If...

No known medical conditions preclude the use of Hibiscus.

Special Cautions

No problems or side effects have been documented.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To make a tea, pour boiling water over 1.5 grams of crushed Hibiscus blossoms, steep for 5 to 10 minutes, then strain.

Typical Dosage

No recommendations are on record.

Overdosage

No information on overdosage is available.

HIMALAYAN CEDAR

Name: Himalayan Cedar.

Biological Name: Cedrus deodara Coniferae.

Other Names: Himalayan Cedar Badra daru, Deodar, Devadaru, Devataram, Devdari, Pahari-keli, Pinus Deodara, Snehaviddha, Suradaru, Toon, Toona, Toon-maram, Vrikashapa.

Description

This herb is found all over the Northern Himalayas. It is largely cultivated in India as an ornamental tree. Related species are found in Lebanon, Turkey, Asia, and Africa.

Parts Used: Leaves, wood, bark, turpentine

Constituents

Wood yields an aleo-resin known as Kelanka-tel and a dark-colored oil or tar resembling crude turpentine. Himalayan Cedarwood oil, extracted from the herb, contains alpha- and gamma- atlantone, p-methyl-3-tetrahydroacetophenone.

MEDICINAL APPLICATIONS

Action

—Wood-carminative;

—Bark-powerfully astringent, febrifuge;

—Leaves-mild turpentine properties

Cedarwood oil, extracted from the herb, is used for catarrhal conditions of the respiratory tract. It is an expectorant. Action and Uses in Ayurveda and Siddha Tikta rasam, katu vipakam, ushna veeryam, kapha vata haram, lagu, snigdham, in dam, adhananam, amam, tandra, prameham, kasam.

Externally: Kandu, sodham, megha-vranam.

Action & Uses in Unani

Resolves inflammation, antispasmodic, anti-poison, paralysis, stone in the kidney, fevers.

Uses

—diarrhea
—dysentery
—fever
—inflammation

—kidney stones
—paralysis
—skin diseases
—ulcers

Bark of the herb is a good remedy in remittent and intermittent fevers, diarrhea and dysentery. The powder is used in the treatment of ulcers.

It is particularly valuable for the treatment of bilious fevers and inveterate diarrhea arising from atony of the muscular fiber. Cedarwood oil, extracted from the herb, is used for catarrhal conditions of the respiratory tract. It is an expectorant. It is also useful for ulcers and skin diseases.

Dosage

Oleoresin (oil or tar), powder. The cedarwood oil is used as a rub (Bormelin balm). It also is used sometimes as an inhalation.

Safety

No information available.

HOARHOUND

Name: Horehound.

Biological Name: Marrubium vulgare Labiatae.

Other Names: Horehound, White Horehound, hoarhound, marrubium.

Parts Used: Dried leaves and flowering tops

Active Compounds

—Marrubim, a diterpene lactone, with premarrubim
—Diterpene alcohols: marruciol, marrubenol, sclareol, peregrinin, dihydroperegrinin
—Volatile oil, containing a-pinene, sabinene, limonene, camphene, p-cymol, a-terpinolene
—Alkaloids; traces of betonicine and its isomer turicine
—Miscellaneous; choline, alkanes, phytosterols, tanins etc.

Remedies For

Expectorant, anti-spasmodic, bitter, vulnerary, emmenagogue, pectoral, aromatic, diaphoretic, tonic, diuretic, hepatic, stimulant. Horehound is valuable in the treatment of bronchitis where there is a non-productive cough.

It combines the action of relaxing the smooth muscles of the bronchus whilst promoting mucus production and thus expectoration. Used in the treatment of whooping cough.

The bitter action stimulates the flow and secretion of bile from the gall-bladder, aiding digestion. Horehound is used externally to promote the healing of wounds.

Combinations: Depending upon the specific needs, it combines well with Coltsfoot, Lobelia, Elecampane, Wild Cherry Bark and Mullein

Description: Found throughout Europe.

Dosage

Infusion: Pour a cup of boiling water onto l/2 –1 teaspoonful of the dried herb and leave to infuse for 1–15 minutes. This should be drunk three times a day.

Tincture: 1–2 ml of the tincture 3 times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

HOLLYHOCK

Latin Name: Alcea rosea.

Other Names: Althea Rose, Malva Flowers, Rose Mallow.

A Remedy For

Some people consider Hollyhock a remedy for bronchitis, cough, and indigestion, and it's taken for fever, sore throat, kidney inflammation, and menstrual problems as well.

Applied externally, it's used as a treatment for skin inflammation and ulcers. There is little evidence, however, that it will actually relieve any of these problems.

What It Is; Why It Works

From its origin in central Asia, Hollyhock has spread around the world. The plant is a tall ornamental that every two years produces showy groups of blood-red or purple flowers up to 4 inches in diameter.

It's the dark purple blossoms that are considered medicinal. They have been used as a healing herb since at least the Middle Ages.

Avoid If...

No known medical conditions preclude the use of Hollyhock.

Special Cautions

At customary dosage levels, the flower poses no risks.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Hollyhock is prepared as a tea.

Typical Dosage

Follow the supplier's directions whenever available.

Overdosage

No information on overdosage is available.

HOLY THISTLE

Name: Milk Thistle.

Biological Name: Silybum marianum.

Family: Compositae.

Other Names: Holy thistle, marythisle, St. Mary's thistle, Marian Thistle, Milk Thistle.

Parts Used: Seeds, leaves.

Active Compounds

Milk thistle seeds contain a bioflavonoid complex known as silymarin. This constituent is responsible for the medical benefits of the plant. Silymarin is made up of three parts: silibinin, silidianin, and silicristin. Silibinin is the most active and is largely responsible for the benefits attributed to silymarin.

History

Pliny, a first century A.D. Roman naturalist, stated that Milk Thistle was "excellent for carrying off bile". In other words, it restores impaired liver functions. Milk thistle supplies an antidote to the death cap mushroom (Amanita phalloides), which kills its victims by destroying liver cells. Ancients believed that the white veins that mottled the leaves of milk thistle represented drops of the Virgin Mary's milk, fallen there when she nursed baby Jesus.

Remedies For

—Gallstones
—Liver support
—Psoriasis

Milk thistle is believed to protect the cells of the liver by blocking the entrance of harmful toxins and helping to remove these toxins from the liver cells. As with other bioflavonoids, silymarin is a powerful antioxidant. Milk thistle also regenerates injured liver cells.

The leaves of milk thistle provide a bitter tonic. The seeds are cholagogue. Leaves are used for common stomach problems like lack of appetite and dyspepsia. The seeds are used for liver, gallbladder, and spleen problems, and for jaundice and gallstone colic.

A recent study found that milk thistle may offer some protection against the toxic side effects of the common painkiller acetaminophen

Description

A stout, annual or biennial plant found in dry, rocky soils in southern and western Europe and in some parts of the US. The branched, shining brown stem grows 1 to 3 feet high and bears alternate, dark green, shiny leaves with spiny, scalloped edges and white spots along the veins. The upper leaves clasp the stem. Large solitary, purple flower heads subtended by spiny bracts appear from June to August.

Dosage

Many people with liver disease and impaired liver function take 420 mg of silimarin per day from an herbal extract of milk thistle standardized to 70–80% silymarin content. Improvement should be noted in about 8 to 12 weeks. When that occurs, reduce to intake to 280 mg of silymarin per day. The lower amount also may be used for preventive measures. Milk thistle seeds can be ground and eaten or made into a tea. Use 12–15 grams. This should not be considered as therapeutic for conditions of liver.

Safety

Silymarin stimulate liver and gallbladder activity. Hence, it may have a mild, transient laxative effect in some individuals. This will cease within two to three days.

Other than this, milk thistle extract is virtually devoid of any side reactions. It may be used by a wide range of people, including pregnant and lactating women.

HONEYSUCKLE FLOWERS

Name: Honeysuckle flowers.

Biological Name: Lonicerae japonicae Caprifoliaceae.

Other Names: Honeysuckle flowers, Jin yin hua, lonicera.

Parts Used: Flowers.

Remedies For

Anti-inflammatory, antipyretic, anti-microbial. This herb has broad-spectrum antibiotic properties and can be used for all infections and inflammations. It is especially effective when the infection is in the respiratory tract; but is also effective for some gastrointestinal tract inflammations. It is useful for fevers, the common cold, sore throat, and influenza.

Dosage

6–15 grams; large doses (up to 60 grams) can be used effectively and safely in severe cases under the supervision of a qualified professional.

Safety

This herb should not be used by those with weakness in the spleen/stomach system when there is cold or diarrhea. It should be used carefully when there are sores due to qi or yin deficiency.

HORSERADISH

Name: Horseradish.

Biological Name: Cochlearia armoracia.

Other Names: Horseradish.

Parts Used: Root.

Active Compounds

Horseradish contains many compounds similar to mustard, which is in the same botanical family. Among these constituents are volatile oil, isothiocyanates, and glycosides.

Horseradish has antibiotic properties, which may account for its easing of throat and upper respiratory tract infections. The glycosides are responsible for the reddening effect (by increasing blood flow to the area) when horse-radish is applied topically.

History

Horseradish, known for its pungent taste, has been used as a medicine and condiment for centuries in Europe. Horseradish was used both internally and externally.

Applied to the skin, it causes reddening and was used on arthritic joints or irritated nerves. Internally, it was considered primarily to be a diuretic and was used for kidney stones or edema. It was also recommended as a digestive stimulant. In addition, it found use in the treatment of worms, coughs, and sore throats.

Remedies For

Horseradish is useful for

—Bronchitis

—Common cold sore throat

—Indigestion

—Sinus congestion

Diuretic, rubefacient, stomachic. The diuretic properties of fresh horseradish make it useful for gouty and rheumatic problems and also for bladder infections.

Description

Horseradish is a perennial plant native to southeastern Europe and western Asia, and occasionally found wild but usually cultivated in other parts of the world. The long, white, cylindrical or tapering root produces a 2 to 3 foot high stem in the second year.

The large basal leaves are lanceolate with scalloped edge; the stem leaves are much smaller, sessile, lanceolate, and serrate to entire. A panicle of numerous white flowers appears during June and July.

Dosage

The freshly grated root can be eaten in the amount of 1/2–1 teaspoon three times per day. Horseradish tincture is also available and can be used in the amount of 2–3 ml three times per day. Only undried horseradish is effective. The root can be preserved for months inside the refrigerator.

Vinegar: Cover finely grated horseradish with vinegar and let stand 10 days. Take 1 tsp. Two to three times per day, well diluted with water. This can also be applied externally.

Poultice: Spread fresh, grated root on a linen cloth. Lay on the affected area, with cloth against the skin, until a burning sensation is felt.

Syrup: Steep 1 tsp. Root in 1/2 cup boiling water in a covered pot for 2 hours. Strain and add sugar until syrupy consistency is reached.

Use sugar or honey to make the horseradish more palatable.

Dosage for specific ailments

Bladder Infections: 3 to 4 tbsp of grated horseradish with wine vinegar and grape sugar per day.

Colitis and Intestinal Problems, Coughs and asthma: Take horseradish combined with honey and raw sugar.

Safety

Very high doses of horseradish can cause vomiting or excessive sweating. Direct application to the skin or eyes may cause irritation and burning.

Horseradish should be avoided by patients with hypothyroidism.

HOUTTUYNIA

Name: Houttuynia.

Biological Name: Radicis houttuyniae Saururaceae.

Other Names: Houttuynia, Yu xing cao.

Parts Used: Leaves.

Remedies For

Anti-inflammatory, antimicrobial, diuretic, expectorant. This herb is indicated for any toxic heat of the lungs in which there is thick yellow or green sputum. It can also be used for other hot swellings, either internally or externally, as it will help expel pus and cool the inflammation.

Dosage

15–40 grams.

Safety

Do not use if you are suffering from cold deficiency symptoms.

HUA SHI

Name: Talcum.

Biological Name: Talcum.

Other Names: Talcum, hua shi.

Remedies For

Diuretic, antibacterial, antiemetic, antidiarrheal. Dispels dampness, clears heat, soothes irritation. It is used to treat difficult, scanty, or painful urination and to relieve damp heat and symptoms of summer heat, including diarrhea, and fever. Used when there is poisoning, both internally and externally, diluting and absorbing toxins and slowing the rate of poisoning. Also useful for skin rashes and as a wash or douche for the mucous membranes. It can be taken internally to help stop diarrhea and vomiting.

Dosage

9–12 grams in decoction; it should be placed in a cheesecloth to separate it from the rest of the herbs.

Combinations: For the pain of urinary stones, combine 12 grams of talcum with 9 grams each of polyporus, poria, plantain seed, and alisma and 4 grams of cinnamon twigs.

For summer heat patterns with dampness, thirst that is not satisfied with drinking, vomiting, and diarrhea, combine 12 grams of talcum and 6 grams of licorice.

Safety

Talcum should not be used when there are no signs of damp heat, and it should be avoided during pregnancy.

HUANG BAI

Name: Phellodendron.

Biological Name: Phellodendron amurense Rutaceae.

Other Names: Phellodendron, Huang Bai.

Parts Used: Bark.

Remedies For

Anti-inflammatory, antipyretic, cholagogue, antibacterial, lowers blood sugar. Purges heat, detoxifies, clears damp heat. Used for infections and inflammation with possible symptoms of discharge from the anus, vagina, or penis.

It also is customarily used for night sweats, afternoon fever, and nocturnal emissions. Phellodendron is an effective herb used topically for sores and damp heat conditions of the skin.

Dosage

3–9 grams.

Safety

Phellodendron should not be used by those with spleen or stomach deficiency with or without diarrhea.

HUNDRED HUSBANDS

Name: Hundred Husbands.

Biological Name: Asparagus racemosus, Asparagus sarmentosus, Asparagus gonoclados, Asparagus adscendens Liliaceae.

Other Names: Hundred Husbands, Shatavari, Shatamuli, Chatavari, Snatamuli, Satavar.

Description

This is found in the jungles around 8,000 feet altitude throughout India, especially Northern India. This is related to asparagus adscendens, another herb.

Parts Used: Root.

MEDICINAL APPLICATIONS

Action

Antidiarrhetic, antispasmodic, aphrodisiac, antidysenteric, demulcent, diuretic, galactagogue, nutritive, mucilaginous, refrigerant, stomachic, tonic.

Uses

—cancer—strengthens one from and for chemotherapy

—convalescence

—cough

—dehydration

—diarrhea

—dysentery

—fevers (chronic)

—hematemesis

—herpes

—hyperacidity

—Immune system boost-good for AIDS, Epstein Barr

—impotence

—infertility

—leukorrhea

—lung abscess

—menopause

—muscle spasms

—rheumatism

—sexual debility

—stiff joints and neck

—stomach ulcers

This herb, used externally, is said to increase breast milk and semen production. It also nurtures mucous membranes, blood cleanser, supplies female hormones, nourishes the ovum, etc.

Dosage

Decoction, powder, ghee, oil; for serious diseases like cancer, use one or more ounces daily.

Safety

Do not use if congested.

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

HYDRANGEA

Name: Hydrangea.

Biological Name: Hydrangea arborescens Saxifragaceae.

Other Names: Hydrangea, Seven Barks, Wild Hydrangea.

Parts Used: Dried roots and rhizome.

Active Compounds

—Flavonoids; kaempferol and quercetin

—Hydrangin, saponin, volatile oil

Remedies For

Diuretic, anti-lithic: Hydrangea's greatest use is in the treatment of inflamed or enlarged prostate glands. It may also be used for urinary stones or gravel associated with infections such as cystitis.

Combinations: In kidney stones, hydrangea is often combined with Stone Root, Bearberry and Gravel Root. In prostate problems it combines well with Horsetail and Saw Palmetto.

Dosage

Decoction: Put 2 teaspoonfuls of the root in a cup of water, bring to the boil and simmer for 10–15 minutes. This should be drunk three times a day.

Tincture: 2–4 ml of the tincture 3 times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

HYSSOP

Name: Hyssop.

Biological Name: Hyssopus officinalis Labiatae.

Other Names: Hyssop.

Parts Used: Dried aerial parts.

Active Compounds

Terpenoids; including marrubiin, oleanolic and ursolic acids Volatile oil, composed mainly of camphor, pinocaphone, thujone, isopinocamphone, with a- and b-pinene, a-terpinene, linalool, bornyl acetate and many others.

Flavonoids, including diosmin and hesperidin.

Miscellaneous: hyssopin (a glucoside), tannins 5–8%, resin.

Remedies For

Anti-spasmodic, expectorant, diaphoretic, nervine, anti-inflammatory, carminative, hepatic, emmenagogue.

Hyssop's herbal uses are largely attributable to the anti-spasmodic action of the volatile oil. It is used in coughs, bronchitis and chronic catarrh. Its diaphoretic properties makes it useful for its use in the common cold. As a nervine, it may be used in anxiety states, hysteria and petitmal (a form of epilepsy).

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

I

ICELAND MOSS

Name: Iceland Moss.

Biological Name: Cetraria islandica Parmeliaceae.

Other Names: Iceland Moss.

Parts Used: The entire plant. It is a lichen.

Active Compounds

—Lichen acids (depsidones); mainly fumarprotocetraric, protocetraric, cetraric, protolichesteric, lichesteric and usnic acids.

—Polysaccharides, about 50%; mainly lichenin and isolichenin

—Miscellaneous; furan derivatives, fatty acid lactones and terpenes

Remedies For

Demulcent, anti-inflammatory, anti-emetic, expectorant.

As a soothing demulcent with its high mucilage content, Iceland Moss is used in the treatment of gastritis, vomiting and dyspepsia. It is often used in respiratory catarrh and bronchitis, soothing mucous membranes. Its nourishing qualities contribute to the treatment of cachexia, a state of malnourishment & debility.

Combinations: For the treatment or nausea and vomiting, it can be combined with Black Horehound.

Dosage

Decoction: Put 1 teaspoonful of the shredded moss in a cup of cold water, boil for 3 minutes and let stand for 10 minutes. A cup should be drunk morning and evening.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

IMMORTELLE

Latin Name: Helichrysum arenarium.

Other Names: Eternal Flower, Everlasting, Yellow Chaste Weed.

A Remedy For

—Appetite loss

—Liver and gallbladder problems

Immortelle is a treatment for the discomfort of gallbladder conditions, such as cramps. It is also used as a remedy for indigestion and water retention, although its effectiveness for these problems remains unconfirmed.

What It Is; Why It Works

Immortelle stimulates the production of bile and tends to ease painful spasms. It also contains antibacterial compounds. Both the dried flower and the entire plant are used medicinally.

Immortelle grows in Europe and the United States. The plant is a protected species.

Avoid If...

Because Immortelle promotes production of bile, you should avoid it if you have a blocked bile duct. If you have gallstones, use of the herb can cause cramps.

Special Cautions

At customary dosage levels, Immortelle poses no known risks.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To make a tea, pour boiling water over 3 to 4 grams (about 2 teaspoonfuls) of crushed Immortelle, steep for 10 minutes, then strain. Drink immediately.

Some commercial drugs for stimulating bile include Immortelle. It also is an inactive ingredient in many specialty teas.

Typical Dosage

Crushed Herb: 3 grams (about 2 teaspoonfuls) daily.

Tea: Freshly brewed tea may be taken throughout the day. Store away from light and moisture.

Overdosage

No information on overdosage is available.

INDIAN MADDER

Name: Indian Madder.

Biological Name: Rubia cordifolia, Rubia manjishta, Rubia secunda Rubiaceae.

Other Names: Indian Madder, Manjishtha, Manjit, Gandari, Manchatti, Manjishta.

Description: This is a climbing plant found in the Himalayas and hill stations in India.

Parts Used: Root, fruit.

MEDICINAL APPLICATIONS

Action

Alterative, anti-tumor, astringent, deobstruent, diuretic, emmenagogue, hemostatic, lithotriptic.

Uses

—amenorrhea

—bleeding

—blood circulation and purification

—cancer

—diarrhea

—dysentery

—dysmenorrhea

—edema

—heart disease

—hepatitis

—herpes

—jaundice

—joint pain
—kidney and gall stones
—menopause
—menorrhagia
—painful menstruation
—paralysis
—skin problems
—rheumatoid arthritis
—obstructions in urinary passages

This herb is also used to cleanse and regulate liver, spleen, pancreas, and kidneys.

The fruit is useful in hepatic obstructions. Root paste removes freckles, and discoloration of the skin.

Dosage

Decoction, powder, paste, ghee.

Safety

CAUTION: MAY CAUSE SEVERE CHILLS.

No further information about the safety of this herb is available.

Use caution. Ayurvedic herbs are often taken in combination to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

INDIGOWEED

Name: Wild Indigo.

Biological Name: Baptisia tinctoria Leguminosae.

Other Names: Wild Indigo, Indigoweed.

Parts Used: Root.

Active Compounds

—Isoflavones; genistein, biochanin etc.
—Flavonoids
—Alkaloids such as cytisine
—Coumarins
—Polysaccharides

Remedies For

Anti-microbial, Anti-catarrhal: Wild Indigo is a herb used to treat focused infection. It is useful in the treatment of infections and catarrh in the ear, nose and throat. Also for laryngitis, tonsillitis, pharyngitis and catarrhal infections of the nose and sinus. Taken both internally and as a mouthwash it will heal mouth ulcers, gingivitis and help in the control of pyorrhea.

Systemically it may be helpful in the treatment of enlarged and inflamed lymph glands (lymphadenitis) and also to reduce fevers. Externally an ointment will help infected ulcers and ease sore nipples. A douche of the decoction will help leucorrhoea.

Combinations: For the treatment of infections it may be used with Echinacea and Myrrh. For lymphatic problems it can be combined with Cleavers and Poke Root.

Dosage

Decoction: Put 1/2–1 teaspoonful of the dried root in a cup of water, bring to the boil and simmer for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

INULA

Name: Pushkarmoola.

Biological Name: Inula racemosaCompositae family.

Other Names: Pushkarmoola, Inula.

Parts Used: Root powder.

Active Compounds

At least four sesquiterpene lactones have been isolated from Inula. These along with other ingredients account for the healing medicinal properties of this herb.

—Alantolacton

—Isoalantolactone

—Dihydroalantolactone

—Dihydroisoalantolactone

—Beta sitosterol

—Daucosterol

—Inunolide

Remedies For

Pushkarmoola is beneficial for

—cardiovascular system

—angina

—dyspnea

Animal Research: In an experiment, rats were given Inula before and after experimental myocardial infarction. Animals given Inula had smaller increases in SGOT, LDH, CPK, CAMP, cortisol, pyruvate, lactate, and glucose than those in an untreated control group.

Clinical Research: Inula was studied in combination with Guggul (Commiphora mukul) using a 1 : 1 mixture. 200 patients with ischemic heart disease were used in the trial. Approximately 80 percent experienced dyspnea, and all 200 subjects had chest pain, with positive indications of myocardial ischemia.

Guggul (Commiphora) is known for its lipid-lowering qualities. It may partially explain the lowering of total cholesterol by 39 percent in these patients. There was also a 51 percent decrease in triglycerides and 32 percent decrease in total blood lipids.

The other results were also equally remarkable. At the end of the six-month study period, 26 percent of the subjects had a complete restoration of normal ECG. Another 59 percent showed improvement in the ECG. Twenty-five percent of the subjects had no chest pain, and patients experiencing dyspnea fell from 80 percent at the beginning of the study to 32 percent.

In another trial, the efficacy of Inula was compared to nitroglycerin for the prevention of anginal symptoms. Nine subjects with ischemic heart disease was used in the study.

All patients experienced chest pain and showed positive for myocardial ischemia by their ECG ST-segment depression on exertion. The Inula group received 3 grams root powder 90 minutes prior to testing. The controls were given nitroglycerin.

All nine subjects had improvement in ST-segment depression on ECG. However, the improvement was greater for those who were given inula.

Description: Inula is an Ayurvedic herb. It grows in the hilly regions in the northwestern Himalayas

IPECAC

Name: Ipecacuanha.

Biological Name: Cephaèlis ipecacuanha Rubiaceae.

Other Names: Ipecacuanha, Ipecac, Rio, Matto Grosso.

Parts Used: Root and rhizome.

Active Compounds

—Isoquinoline alkaloids; usually about 2–3%, consisting mainly of emetine and cephaeline, with psychotrine, O-methylpsychotrine, emetamine and protoemetine.

—Tannins; ipecacuanhin and ipecacuanhic acid.

—Glycosides such as ipecoside (a monoterpene isoquinoline derivative) & saponins.

—Allergens, a mixture of glycoproteins of mol. wt. 35,000–40,000.

—Miscellaneous; starch, choline, resins.

Remedies For

Expectorant, emetic, sialagogue, anti-protozoal.

Ipecacuanha is mainly used as an expectorant in bronchitis and conditions such as whooping cough. At higher doses it is a powerful emetic and is used in the treatment of poisoning. Care must be taken in the use of this herb. After an effective emetic dose has been given, large amounts of water should be taken as well.

Ipecac helps expectoration through stimulation of mucous secretion and its removal. It stimulates the production of saliva. It has been found effective in the treatment of amoebic dysentery.

Combinations: In bronchial conditions Ipecac combines well with White Horehound, Coltsfoot and Grindelia. In amoebic dysentery it may be used with American Cranesbill or Echinacea.

Description: Native to tropical South America, including Brazil, and cultivatedin southern Asia.

Dosage

Infusion: As this is a very powerful herb, only a small amount should be used. 0.01–0.25 grams of the herb are used for an infusion. Pour a cup of boiling water onto a small amount of the herb (equaling the size of a pea) and leave to infuse for 5 minutes. This can be drunk three times a day. If you need to use it as an emetic, 1–2 grams should be used, which equals 1/4–1/2 teaspoonful when used for an infusion.

Safety

Use extreme care in the use of this herb. After an effective emetic dose has been given, large amounts of water should be taken.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

ISAPGHUL

Name: Psyllium.

Biological Name: Plantago ispagula, Plantago ovata.

Other Names: Ispaghula, Spogel Seeds, Ishabgol, Snigdhajira, Isapghul, Psyllium, Plantago.

Description: This herb is found in India and Iran.

Parts Used: Seeds.

Active Compounds

Psyllium is a bulk-forming laxative and is high in both fiber and mucilage. Psyllium seeds contain 10–30% mucilage. The laxative properties of psyllium are due to the swelling of the husk when it comes in contact with water. This forms a gelatinous mass and keeps the feces hydrated and soft. The resulting bulk stimulates a reflex contraction of the walls of the bowel, followed by emptying.

History

In addition to its traditional and current use for constipation, psyllium was also used topically to treat skin irritations, including poison ivy reactions and insect bites and stings. It has also been used in traditional herbal systems of China and India to treat diarrhea, hemorrhoids, bladder problems, and high blood pressure.

Remedies For

Demulcent, emollient, laxative, diuretic

Useful for

—atherosclerosis
—constipation
—diabetes
—diarrhea
—hemorrhoids
—high cholesterol
—high triglycerides
—irritable bowel syndrome
—psoriasis
—weight loss and obesity

Dosage

1–2 tbs. in warm or cool water, stirred until it thickens into a gel.

Many people take 7.5 grams of the seeds or 5 grams of the husks one to two times per day, with water or juice. It's important to maintain adequate fluid intake when using psyllium.

Safety

Using psyllium in recommended amounts is generally safe. People with chronic constipation should seek the advice of a health care professional. Side effects, such as allergic skin and respiratory reactions to psyllium dust, have largely been limited to people working in plants manufacturing psyllium products.

No other information about the safety of this herb is available. Use caution. Ayurvedic herbs are often taken in combination to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

J

JAPANESE MINT

Latin Name: Mentha arvensis var piperascens.

A Remedy For

—Bronchitis

—Colds

—Cough

—Fever

—Liver and gallbladder problems

—Pain

—Sore throat

—Tendency to infection

Japanese Mint is taken primarily to treat respiratory inflammation and relieve gas. As a skin rub, it's used for muscle and nerve pain. In folk medicine, it has also been used for breathing difficulties and heart problems, although its effectiveness for these purposes has not been scientifically confirmed. Asian uses of unverified effectiveness include joint pain, headache, and skin diseases.

What It Is; Why It Works

Japanese Mint grows throughout northern Asia and Europe. Along with other members of the mint family, it's the source of menthol, a common ingredient in over-the-counter cough remedies, including Cepacol Sore Throat Lozenges, Hall's Cough Drops, and Vicks Cough Drops, and ointments such as ArthriCare, Eucalyptamint, and Vicks VapoRub. It exhibits antibacterial and decongestant action, relieves gas, stimulates production of bile, and has a cooling effect.

Avoid If...

Avoid taking Japanese Mint internally if you have blocked bile ducts, gallbladder inflammation, or severe liver damage.

Special Cautions

Do not apply Japanese Mint oil to the faces of infants or small children, especially in the nasal area. It can cause severe spasms, asthma-like attacks, and even respiratory failure, when applied to a child's face.

In adults, the oil can aggravate bronchial asthma and, when taken internally, can cause stomach discomfort.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Japanese Mint oil is available in oily and semi-solid preparations.

Typical Dosage

Internal Use: 2 drops of oil in a glass of water, tea, or juice, 1 or 2 times daily. Take no more than 6 drops per day.

Inhalation: 3 or 4 drops in hot water.

External Use: Rub a few drops on the affected area.

Overdosage

Doses of as little as 2 grams of menthol can be fatal. If you suspect an overdose, seek medical attention immediately.

JASMINE

Latin Name: Jasmine officinale.

Other Names: Royal Jasmine, Italian Jasmine, Catalonian Jasmine, Poet's Jasmine.

A Remedy For

Jasmine appears historically in the artistic, religious, and healing practices of many ancient and exotic cultures. One scientific study examined an old local custom of applying fresh East Indian Jasmine flowers to the breasts of nursing mothers to inhibit milk flow, a practice that appeared to work. Although Jasmine is suggested for many other conditions, there is no evidence of its effectiveness.

Asian and Indian folk practitioners recommend Jasmine for liver complaints, dysentery, various types of pain including painful menstruation, and skin diseases such as leprosy. In addition, Jasmine oil applied externally is used to soften and smooth the skin.

Aromatherapists believe Jasmine can be useful as an antidepressant, as a calming agent to soothe stress, pain, and anxiety, and as an aphrodisiac. Its reputation as an intoxicant is legendary. Proponents also say that inhaling Jasmine scent increases beta waves in the brain, which are associated with increased states of alertness.

Some manufacturers promote Jasmine tea for cancer, heart disease, and a variety of other ills, but the only evidence in its favor involves a Chinese green tea that is merely scented with Jasmine flowers. It is unclear whether the Jasmine is at all responsible. Any health benefits could be due to the catechins contained in the green tea, which are said to help lower cholesterol and protect against cancer.

What It Is; Why It Works

Jasmine is best known for the delicate and captivatingly sweet fragrance of its flowers, which are frequently used in religious ceremonies in India and in Asian and Mediterranean countries.

The extracted oil of the Jasmine is used in a wide range of soaps, cosmetics, and perfumes. Pure Jasmine oil is very rare and expensive, as many petals are needed to obtain even a small quantity of the essential oil. The best Jasmine oil is collected at night when the scent is strongest.

Avoid If...

Do not use Jasmine if you are prone to allergies. It can cause contact dermatitis (skin irritation).

Special Cautions

Never take essential oils internally. They are extremely potent and can be poisonous.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

Do not use Jasmine if you are pregnant or breastfeeding.

How to Prepare

Jasmine teas, lotions, and essential oils are prepared commercially from the flowers.

Typical Dosage

Use Jasmine tea according to the manufacturer's instructions when available. When using the essential oils for various aromatherapy techniques, use 2 to 4 drops and avoid internal use.

Overdosage

No information on overdosage is available.

JAVANESE TURMERIC

Latin Name: Curcuma xanthorrhizia.

A Remedy For

Appetite loss

Liver and gallbladder problems

Javanese Turmeric is typically used for indigestion, particularly feelings of fullness after meals and gas. In Indian folk medicine, it has long been used for liver and gallbladder complaints.

What It Is; Why It Works

Javanese Turmeric is a leafy perennial that grows to nearly 6 feet in height. It is native to the forests of Indonesia and the nearby Malaysian peninsula. Medicinally, Javanese Turmeric is similar to the standard variety used worldwide as a kitchen spice. It increases the flow of bile and may discourage the growth of tumors. Its fleshy underground root provides its medicinal value.

Avoid If...

Because of the herb's bile-stimulating properties, do not use Javanese Turmeric if you have a bile duct blockage.

Special Cautions

If you have gallstones, Javanese Turmeric could give you cramps. Stomach problems are also a possibility after long-term use.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To make a tea, pour 1 cup of boiling water over one-half teaspoonful of Javanese Turmeric, steep for 10 minutes, and strain.

Typical Dosage

The average daily dose of the ground herb is 2 grams. The tea may be taken 2 to 3 times daily between meals.

Store protected from light.

Overdosage

The primary sign of an overdose is a stomach problem. Seek medical attention if it becomes severe.

JERUSALEM COWSLIP

Name: Lungwort.

Biological Name: Pulmonaria officinalis Boraginaceae.

Other Names: Lungwort, spotted lungwort, maple lungwort, Jerusalem cowslip, Jerusalem sage, spotted comfrey, oak lungs, lungmoss.

Parts Used: Leaves.

Active Compounds

—Allantoin

Flavonoids: Quercitin and kaempferol

Miscellaneous: Tannins, mucilage, vitamin C, saponins, (unspecified). Pyrrolizidine alkaloids, common in other plants of the Boraginaceae, have been shown to be absent from all samples of Pulmonaria officinalis tested.

Remedies For

Demulcent, expectorant, astringent, anti-inflammatory, vulnerary.

Lungwort has two broad areas of use. The one that provides its name is its use in the treatment of coughs and bronchitis, especially where associated with upper respiratory catarrh. The other broad area is that related to its astringency. It is used in the treatment of diarrhea, especially in children, and in easing hemorrhoids. Externally this plant may be used to heal cuts and wounds.

Combinations: For lung conditions, this herb may be used with White Horehound, Coltsfoot or Lobelia.

Description: Found in shady places; often cultivated in gardens.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

JIMSONWEED

Latin Name: Datura stramonium.

Other Names: Apple of Peru, Devil's Apple, Devil's Trumpet, Jamestown Weed, Mad-apple, Nightshade, Stinkweed, Thornapple.

A Remedy For

Jimsonweed is taken for cough and bronchitis, and has been smoked in many parts of the world as a remedy for asthma. It is also prescribed for diseases of the nerves that regulate the internal organs, and for Parkinson's disease. The plant is, however, quite poisonous, and medicinal use is therefore not recommended.

What It Is; Why It Works

Although originally found in Central America, Jimsonweed now grows in most temperate and subtropical parts of the world. Typically reaching a height of nearly 4 feet, the plant sprouts a single white flower at the tip of each branch. Its foliage has an unpleasant smell, but the flowers are fragrant. The plant's dried leaves and ripe seeds are used medicinally.

Jimsonweed has been considered a healing herb for centuries. One early commentator recommends its juice for curing burns from "fire, water, boiling lead, gunpowder, [and] that which comes by lightning." It contains atropine, a potent chemical that combats spasms and generally diminishes muscular activity in the digestive system, lungs, and other internal organs. Atropine is among the active ingredients in the prescription drugs

Donnatal, Lomotil, and Urised. In large doses, it can easily prove lethal.

Avoid If...

Do not take Jimsonweed if you have glaucoma or any reason to suspect it.

Also avoid this herb if you have an obstruction in the outlet from the stomach, intestinal failure or blockage, an enlarged prostate, an irregular heartbeat, swelling in the lungs, difficulty passing urine, or hardening of the arteries.

Special Cautions

Jimsonweed has a pronounced drying effect, leading to diminished urination, extreme constipation, and heat build-up due to a decline in perspiration.

Other side effects (often early warning signs of poisoning) include skin reddening, dry mouth, enlarged pupils, and a fast, irregular heartbeat. Vision problems, such as difficulty focusing, are also a possibility.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No information is available.

How to Prepare

Use is not recommended.

Typical Dosage

Use is not recommended.

Overdosage

Doses delivering 100 milligrams or more of atropine can be fatal. This amounts to 15 to 100 grams of Jimsonweed leaf, or 15 to 25 grams (1 to 11/2 tablespoonfuls) of the seeds. Much smaller quantities will poison a child. Death occurs when the drug paralyzes the respiratory system.

Signs of overdose include restlessness, compulsive speech, hallucinations, delirium, and manic episodes, followed by exhaustion and sleep. If you suspect an overdose, seek emergency treatment immediately.

JUNIPER BARK

Name: Juniper Berries.

Biological Name: Juniperus communis Cupressaceae.

Other Names: Juniper Berries, Juniper bush, Juniper bark.

Parts Used: Dried fruits.

Active Compounds

—Volatile oil, containing mainly myrcene, sabinene and x-pinene, with 4-cineole, p-cymene, camphene, limonene, b-pinene, terpin-4-ol, y-terpinene, x-thujene.

—Condensed tannins; ()-afzelechin, (-)-epiafzelechin, ()-catechin, (-)-epicatechin, ()-gallocatechin and ()-epigallocatechin

—l,4-dimethyl-3-cyclohexen-l-yl, methyl ketone.

—Diterpene acids; myreocommunic, communic, sandaracopimaric, isopimaric, torulosic acids and other diterpenes such as geijerone

—Miscellaneous; sugars, resin, vitamin C.

Remedies For

Diuretic, anti-microbial, carminative, anti-rheumatic, tonic, antiseptic, stomachic Juniper Berries make an excellent antiseptic in conditions such as cystitis. The essential oil present is quite stimulating to the kidney nephrons and so this herb should be avoided in kidney disease. The bitter action aids digestion and eases flatulent colic. It is used in rheumatism and arthritis. Externally, it eases pain in the joints or muscles.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of lightly crushed berries and leave to infuse for 20 minutes. A cup should be drunk night and morning.

Tincture: 0.5–1 ml three times a day.

Safety

CAUTION: DUE TO ITS ACTION ON THE KIDNEYS, JUNIPER BERRIES SHOULD BE AVOIDED IN ANY KIDNEY DISEASE. DO NOT USE IT IF YOU ARE PREGNANT.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

K

KAMALA

Biological Name: Mallotus philippinensis, Croton philippinesis, Glandulae rottlerae, Croton punctatus, Croton coccineum Euphorbiaceae.

Other Names: Kamala, Rechanaka, Raktang Kapila, Korangumanjanati, Kunrangumanjal, Kuramedakku, Sindooramaram.

Description

This small evergreen shrub of the Spurge family is found all over India, Australia, and many other parts of the world. The medicinal properties of this plant was mentioned in Kurmapurana, an ancient Indian text.

Parts Used: Glands and hairs from the capsules or fruits.

MEDICINAL APPLICATIONS

Action

Anthelmintic, aphrodisiac, cathartic, lithotriptic.

Uses

—aperient

—purgative

—tapeworms

The main use of this herb is as powder obtained by crushing of the fruits or capsules. The powder is used in eye-diseases. It is also a folk remedy for tape-worm. Taken internally, Kamala reportedly removes leprous eruptions. The powder from the plant is used to produce orange-brown die for coloring silk.

Dosage

Ripe fruits are placed in a cloth and beaten until the glandular pubescence is removed; or fruits are rubbed between one's palms or feet.

Safety

This herb may cause nausea or gripping before purging.

No other information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

KANCHANAR

Name: Mountain Ebony.

Biological Name: Bauhinia variegata, Bauhinia racemosa Caesalpiniaceae.

Other Names: Mountain Ebony, Kanchnar, Kanchanar, Chuvanna mandaram, Kanchanaram, Kavidara

Description

This herb is found in sub-Himalayan forests of India, Burma, and several other countries.

Parts Used: Bark, root, leaves, flowers, seed, gum.

MEDICINAL APPLICATIONS

Actions

—Bark-alterative, tonic

—Root-carminative

—Flowers-laxative.

Uses

—bleeding hemorrhoids

—cough

—diarrhea

—dysentery

—heartburn

—hematuria

—indigestion

—malaria

—menorrhagia

—skin diseases

—sore throat

—TB

—ulcer

—Worms

Useful in haematuria and menorrhagia. Decoction of the roots prevents obesity. Bark preparations used in scrofuluous tumors.

—Remedies incorporating this herb.

Kanchanar Guggul: This is an Ayurvedic remedy for ulcers, skin diseases, TB tumors, gonorrhea, and edema. It is also prescribed to increase the white blood cells.

Dosage

Forms Used: Emulsion, pill, paste, gargle, decoction.

KATKI

Name: Katuka.

Biological Name: Picrorrhiza kurroa Scrophulariaceae.

Other Names: Katuka, Kutki, Katki Balkadu, Kadugu-rohini, Katukarogani, Kali kutki, Katuki, Katurohini, Khanekhaswael, Kharbaqe-hindi, Kuru.

Description

This herb is found in the Himalayan mountains from Kashmir in India to Sikkim.

Parts Used: Dried rhizome.

Constituents

Root contains a glucoside called "Picrorrhizin", a fairly large percentage of soluble bitter substance with an acid reaction. The herb also contains other substances such as glucose, wax, cathartic acid etc.

MEDICINAL APPLICATIONS

Action

—Small doses-bitter stomachic and laxative.

—Large doses—anti-periodic, cathartic, cholagogue.

—emmenagogue, emetic, abortifacient.

Uses

—constipation

—epilepsy

—improves eye sight

—fever

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—malaria
—paralysis
—scorpion sting
—skin diseases

The following are examples of remedies where this herb is used in Ayurveda: Two drachms of powdered root with sugar and warm water is useful as a mild purgative. Ten to twenty grains of the powder with aromatics or herbs such as pepper, asafoetida, triphala and salts is useful in constipation due to scanty intestinal secretions.

Katuki–Neem Remedy: This Ayurvedic decoction is useful for bilious fever.

Katuki Calamus Remedy for Dyspepsia: This is an Ayurvedic home remedy for dyspepsia with severe pains.

Dosage

Tincture, extract, powder, pills.

Safety

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

KNOTWEED

Latin Name: Polygonum aviculare.

Other Names: Allseed Nine-joints, Armstrong, Beggarweed, Bird's Tongue, Birdweed, Centinode, Cow Grass, Crawlgrass, Doorweed, Hogweed, Knotgrass, Pigweed, Red Robin, Sparrow Tongue, Swine's Grass.

A Remedy For

—Bronchitis
—Cough
—Sore throat

Although its effectiveness for other purposes has not been verified, Knotweed has also been used as supportive treatment for pulmonary disorders, to inhibit perspiration in cases of tuberculosis, to promote urination, to stop bleeding in cases of hemorrhage, and to treat various skin disorders.

In Asia, it is taken for gonorrhea, jaundice, itching, and dysentery.

What It Is; Why It Works

Knotweed is a sturdy annual plant found in most temperate regions of the world. The Latin name "aviculare" comes from "aviculus," the diminutive form of the Latin word for "bird"—chosen, no doubt, because of the countless birds attracted by its seeds. The plant's tiny red flowers led to the name "Red Robin."

The "Swine's Grass" appellation dates from a time when farmers fed the herb to their ailing pigs. The above-ground parts of the flowering plant, fresh or dried, are considered medicinal. The dried root is used as well. The herb exhibits an astringent, tightening action.

Avoid If...

There are no medical conditions known to preclude the use of Knotweed.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Ground Knotweed can be taken internally and applied to the skin. Knotweed extract is found in many cough syrups and diuretics (medicines used to flush excess fluid from the body).

To prepare Knotweed tea, combine 1.5 grams (about one teaspoonful) of finely cut Knotweed with cold water, bring to a simmer, steep for 5 to 10 minutes, and strain.

Typical Dosage

Knotweed tea may be taken 3 to 5 times daily. The total daily dosage of the herb should be 4 to 6 grams (about 23/4 to 41/4 teaspoonfuls).

Overdosage

No information on overdosage is available.

KU SHEN

Name: Sophora.

Biological Name: Sophorae flavescentis Leguminosae.

Other Names: Sophora, Ku Shen, Sophora root.

Parts Used: Root.

Remedies For

Anti-inflammatory, diuretic, antibacterial, antifungal, parasiticide. Useful for the treatment of acute urinary tract infections, vaginal or anal discharge with itching, or eczema. It also kills worms and is helpful in cases of ringworm. it can also be used topically to treat genital itching.

Dosage

3–12 grams.

Safety

Sophora root should not be used by those with weakness and cold in the spleen and stomach.

CAUTION: SOPHORA ROOT SHOULD NOT BE USED WITH RADIX VERATRI.

L

LAMINARIA

Latin Name: Laminaria hyperborea.

A Remedy For

Laminaria is sometimes used for thyroid problems, although there has been little research on its effectiveness.

What It Is; Why It Works

Laminaria is a variety of kelp, or seaweed, found on the North Atlantic coast.

Dried kelp is a source of iodine, and has been used medicinally since the beginning of the 19th century.

Avoid If...

No known medical conditions preclude the use of Laminaria.

SPECIAL CAUTIONS: BE CAREFUL ABOUT THE AMOUNT YOU TAKE. DOSES OF IODINE IN EXCESS OF 150 MICRO GRAMS A DAY CAN INDUCE OR WORSEN AN OVER ACTIVE THYROID GLAND. SEVERE ALLERGIC REACTIONS, ALTHOUGH RARE, ARE A POSSIBILITY.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

No recommendations are available.

Typical Dosage

Follow the manufacturer's directions whenever available.

Overdosage

Warning signs of excessive thyroid stimulation include thyroid enlargement, rapid heartbeat, palpitations, nervousness, agitation, increased sweating, fatigue, weakness, insomnia, increased appetite, and weight loss.

LAPACHO

Name: Pau d'arco.

Biological Name: Tabebuia impestiginosa.

Other Names: Pau d'arco, Lapacho, taheebo.

Parts Used: Bark.

Active Compounds

Lapachol and beta-lapachone (known collectively as naphthaquinones) are two primary active compounds in pau d'arco.

According to laboratory tests, both have antifungal properties as potent or more so than ketaconazole, a common antifungal drug. Although these compounds also have anticancer properties, the effective dosage for this effect is toxic. Therefore, pau d'arco cannot currently be recommended as a treatment for cancer.

History

Native peoples in Central and South America reportedly use pau d'arco bark to treat cancer, lupus, infectious diseases, wounds, and many other health conditions.

Caribbean folk healers use the leaf of this tree in addition to the bark for the treatment of backache, toothache, sexually transmitted diseases, and as an aphrodisiac. It had been used as a folk remedy for the treatment of cancers.

Remedies For

Herbalists recommend the tea of Pau d'arco for problems ranging from osteomyelitis, ringworm, bronchitis, gastritis, colitis, cystitis, prostatitis, lupus and Hodgkin's disease. Its primary value is in the elimination of the pain from any disease.

Also Useful for the Treatment of:

—infection

—yeast infection

—pain management

—folk remedy for cancer

Description

Various related species of pau d'arco trees grow in rain forests throughout Latin America. In the rain forests these tress grows upwards of 100 feet with a trunk circumference exceeding four feet.

The leaves are deciduous, opposite on yellow green stems. They have five elliptic leaves of unequal size that can either be lanceolate or ovate shaped.

These leaves are uniquely placed in whorls comparable to the fingers of someone's hand. The stems are dark green on top and yellowish green below.

The flowers vary in color depending on the species. They range in color from blue and yellow to magenta and purple. They have yellow throats and are either bell or funnel shaped.

Dosage

Because the naphthaquinone active constituents are not water soluble, a tea from pau d'arco bark is ineffective. Capsules or tablets providing 300 mg of powdered bark can be taken; usually three capsules are ingested three times per day. A tincture can be used in the amount of 0.5–1 ml, three times per day.

To Make Tea: Boil one quart water. Add two cups of crudely cut inner bark. Cover and simmer for 20 minutes. Set aside and steep 1–1/2 hours. Strain and refrigerate.

Drink one cup 5 times daily on an empty stomach. To be effective, the bark should come from mature trees.

Many herbs in the market are found to have immature bark which is not effective or does not have active ingredients sufficient for the cure.

Safety

High doses of lapachol can cause uncontrolled bleeding, nausea, and vomiting. Use of the whole bark is much safer than isolated lapachol—the whole bark has no known serious side effects.

Pregnant or lactating women should avoid use of pau d'arco. No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

LARCH

Latin Name: Larix decidua.

A Remedy For

—Blood pressure problems
—Bronchitis
—Colds
—Cough
—Fever
—Rheumatism
—Sore throat
—Tendency to infection

What It Is; Why It Works

Larch is a very fast-growing type of tree (six times faster than oak) native to central Europe and cultivated in North America. The medicinal part is the outer bark.

Avoid If...

No medical conditions are known to preclude the use of Larch.

Special Cautions

Do not inhale Larch. It can cause acute inflammation of the breathing passages. The oil can be absorbed through the skin; excessive external use can result in damage to the kidneys or the central nervous system.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Larch is used to make liquid and semi-solid preparations for external use including ointments, gels, and emulsions containing 10 to 20% essential larch oil.

Typical Dosage

For external use only.

Overdosage

No information on overdose is available.

LARGE-LEAFED GENTIAN ROOT

Name: Large-leafed gentian root.

Biological Name: Gentianae qinjiao Gentianaceae.

Other Names: Large-leafed gentian root, Qin jiao.

Parts Used: Root.

Remedies For

Anti-inflammatory, antibiotic, antipyretic This is an important herb for arthritic and rheumatic conditions that exhibit pain, swelling, and redness and for muscular spasms.

Chinese herbalists recommend this herb for the treatment of asthenic fever associated with wasting, such as infantile malnutrition, tuberculosis (TB) and acquired immunodeficiency syndrome (AIDS). For these conditions, it is combined with anemarrhena and lycii root bark. It is also used as a diuretic and as a laxative. It is effective for relieving jaundice and dysuria.

Dosage

3–9 grams.

LETTUCE OPIUM

Name: Wild Lettuce.

Biological Name: Lactuca virosa Compositae.

Other Names: Wild Lettuce, Lettuce Opium.

Parts Used: Dried leaves.

Active Compounds

—Lactucin, a sesquiterpene lactone
—Flavonoids; mainly based on quercitin
—Coumarins; cichoriin and aesculin
—N-methyl-b-phenethylamine

Remedies For

Nervine, anodyne, hypnotic, anti-spasmodic. Wild Lettuce is a valuable remedy for use in insomnia, restlessness and excitability (especially in children) and other manifestations of an over active nervous system. As an anti-spasmodic it can be used as part of a holistic treatment of whooping cough and dry irritated coughs in general.

It will relieve colic pains in the intestines and uterus and so may be used in dysmennhorea. It will ease muscular pains related to rheumatism. It has been used as an anaphrodisiac.

Combinations : For irritable coughs it may be used with Wild Cherry Bark. For insomnia it combines with Valerian and Pasque Flower.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the leaves and let infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

LICORICE

Name: Licorice.

Biological Name: Glycyzrrhiza glabra Leguminosae, Papilionaceae.

Other Names: Licorice, Yashtimadhu, Mithilakdi, Mulathi, Liquorice, sweetwood, licorice root Atimadhuram, Erattimadhuram, Liquorice.

Description

This herb is found in many countries. It is believed to give contentment and harmony.

Parts Used: Dried root.

Active Compounds

—Triterpenes of the oleanane type, mainly glycyrrhizin (=glycyrrhizic or glycyrrhizinic acid), and its agylcone glycyrrhetinic acid (=glycyrrhitic acid), liquiritic acid, glycyrrhetol, glabrolide, isoglabrolide, licoric acid, & phytosterols
—Flavonoids and isoflavonoids; liquiritigenin, liquiritin, rhamnoliquiritin, neoliquiritin, licoflavonol, licoisoflavones A and B, licoisoflavanone, formononetin, glabrol, glabrone, glyzarin, kumatakenin and others
—Coumarins; liqcoumarin, umbelliferone, herniarin glycyrin
—Chalcones; liquiritigenin, isoliquiritigenin, neosoliquiritin, rhamnoisoliquiritin,

licuraside, licochalcones A and B, echinatin and others

—Polysaccharides, mainly glucans

—Volatile oil, containing fenchone, linalool, furfuryl alcohol, benzaldehyde

—Miscellaneous; starch, sugars, amino acid etc.

History

Licorice is a traditional herbal remedy with an ancient history and world wide usage. Modern research has shown it to have effects upon, amongst other organs, the endocrine system and liver. The triterpenes of Glycyrrhiza are metabolized in the body to molecules that have a similar structure to the adrenal cortex hormones. This is possibly the basis of the herbs anti-inflammatory action.

MEDICINAL APPLICATIONS

Action

Anti-inflammatory, anti-hepatotoxic, anti-spasmodic, demulcent, emetic, expectorant, laxative, rejuvenative, sedative, tonic.

Uses

—abdominal pain
—bronchitis
—colds
—cough
—debility (general)
—heart tonic
—hyperacidity
—inflammation
—laryngitis
—laxative
—mucus membrane toner and soother
—muscle spasms
—sore throat
—ulcers
—painful urination

As an anti-hepatotoxic licorice is effective in the treatment of chronic hepatitis and cirrhosis, for which it is been widely used in Japan. Much of the liver orientated research has focused upon the triterpene glycyrrhizin. This inhibits hepatocyte injury caused by carbon tetrachloride, benzene hexachloride and PCB. Antibody production is enhanced by glycyrrhizin, possibly through the production of interleukin.

Glycyrrhizin inhibits the growth of several DNA and RNA viruses, inactivating Herpes simplex virus particles irreversibly. It has a variety of uses in bronchial problems such as catarrh, bronchitis and coughs in general. Liquorice is used in allopathic medicine as a treatment for peptic ulceration, a similar use to its herbal use in gastritis and ulcers. It can be used in the relief of abdominal colic.

It nourishes the brain-increasing cranial and cerebrospinal fluid. Also improves complexion, hair, and vision.

Dosage

Decoction, milk decoction, powder, ghee.

Decoction: Put 1/2–1 teaspoonful of the root in a cup of water, bring to the boil and simmer for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–3 ml of the tincture three times a day.

Safety

CAUTION: THERE IS A SMALL POSSIBILITY OF EFFECTING

ELECTROLYTE BALANCE WITH EXTENDED USE OF LARGE DOSES OF LICORICE. IT HAS AN ACTH LIKE EFFECT CAUSING RETENTION OF SODIUM THUS RAISING BP. THE WHOLE HERB HAS CONSTITUENTS THAT COUNTER THIS BUT IT IS BEST TO AVOID LICORICE IF THE PATIENT HAS HYPERTENSION, KIDNEY DISEASE OR DURING PREGNANCY.

It may interfere with the calcium and potassium absorption. Do not use if you are suffering from osteoporosis, hypertension (increases water around heart).

Take with boiled milk. No other information about the safety of this herb is available. Use caution. Ayurvedic herbs are often taken in combination with others to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

LIME BLOSSOMS

Name: Linden.

Biological Name: Tilia europea Tiliaceae.

Other Names: Linden, Lime Blossoms, Linden flowers, Tilia.

Parts Used: Dried flowers.

Active Compounds

—Volatile oil, up to about 0.1%, containing farnesol

—Flavonoids; hesperidin, quercitin, astralagin, tiliroside and others

—Miscellaneous; mucilage (in the bract), phenolic acids, tannins

Remedies For

Nervine, anti-spasmodic, hypotensive, diaphoretic, diuretic, anti-inflammatory, emmenagogue, astringent.

Linden is a relaxing remedy for nervous tension. Also used as a prophylactic against the development of arteriosclerosis and hypertension. Also used in the treatment of raised blood pressure associated with arteriosclerosis and nervous tension. Its relaxing action combined with a general effect upon the circulatory system give Linden a role in the treatment of some forms of migraine. The diaphoresis combined with the relaxation explain its value in feverish colds and flu.

Combinations: In raised blood pressure it may be used with Hawthorn and European Mistletoe, with Hops in nervous tension and with Elder Flower in the common cold.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the blossoms and leave to infuse for 10 minutes. This should be drunk three times a day. For a diaphoretic effect in fever, use 2–3 teaspoonfuls.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

LING CHIH

Name: Reishi.

Biological Name: Ganoderma lucidum.

Other Names: Reishi, Reishi Mushroom, Ling chih, ling zhi, mushroom (reishi).

Parts Used: The fruiting body of the mushroom.

Active Compounds

Reishi contains several constituents, including sterols, coumarin, mannitol, polysaccharides, and triterpenoids called ganoderic acids. Ganoderic acids seem to help lower blood pressure as well as decrease low density lipoprotein (LDL) and triglyceride levels. These specific triterpenoids also help to reduce blood platelets from sticking together—an important factor in lowering the risk for coronary artery disease. While human research demonstrates some efficacy for the herb in treating altitude sickness and chronic hepatitis B, these uses still need to be confirmed.

History

The Chinese have always regarded the mushroom as having special properties. Mushrooms are regarded as "spirit medicine' because they are believed to nourish the shen, or spirit. As such, they are considered particularly important in vegetarian diets and regarded as a medicinal food that promotes longevity.

Various medicinal mushrooms are used by the Chinese. One of the oldest recorded botanical monograph has claimed that reishi mushroom made the body lighter, which may refer to its ability to reduce cholesterol and blood lipid levels. They also have immunbe potentiating properties.

Reishi has been used in traditional Chinese medicine for more than 4,000 years. The Chinese name Ling zhi translates as the "herb of spiritual potency" and was highly prized as an elixir of immortality. Its traditional Chinese medicine indications include treatment of general fatigue and weakness, asthma, insomnia, and cough.

Remedies For

Reishi is recommended for:

—altitude sickness

—chemotherapy support

—fatigue

—hepatitis

—HIV support

—high blood pressure

—high triglycerides

Description

Reishi mushrooms grow wild on decaying logs and tree stumps in the coastal provinces of China. The fruiting body of the mushroom is employed medicinally. Reishi occurs in six different colors, but the red variety is most commonly used and commercially cultivated in North America, China, Taiwan, Japan, and Korea.

Dosage

Herbalists recommend 1.5–9 grams of the crude dried mushroom per day, 1–1.5 grams per day in powder form, or 1 ml per day of tincture, or as a tea.

Safety

Side effects from reishi can include dizziness, dry mouth and throat, nose bleeds, and abdominal upset.

These may develop with continuous use over three to six months. As it may increase bleeding time, reishi is not recommended for those taking anti-coagulant (*e.g.*, blood-thinning) medications.

Pregnant or lactating women should consult a physician before taking reishi. Because of these severe side effects we recommend that you consult and be under the supervision of a qualified professional before and during taking this herb.

LION'S EAR

Name: Motherwort.

Biological Name: Leonurus cardiaca Labiatae.

Other Names: Motherwort, Lions Tail, lion's ear, throwwort.

Parts Used: Aerial parts.

Active Compounds

Iridoids: Leonuride and others not yet identified.

—Diterpenes of the labdane type, such as leocardin, a mixture of two epimers of 8b-acetoyx-9a, l3a, l5, l6-bisepoxy-l5-hydroyx-7-oxo- labdan-6b, l9-olide

—Flavonoids; rutin, quinqueloside, genkwanin, quercitin, quercetrin, isoquercetrin, hyperoside, and apigenin and kaempferol glucosides

—Caffeic acid 4-rutinoside

Remedies For

Nervine, emmenagogue, anti-spasmodic, hepatic, cardiac tonic, hypotensive.

Motherwort is used for menstrual and uterine conditions as well as in heart and circulation treatments. It is valuable in the stimulation of delayed or suppressed menstruation, especially where there is anxiety or tension involved. It is a good relaxing tonic for aiding in menopausal changes. Eases false labor pains. An excellent tonic for the heart, strengthening without straining. It is considered to be a specific in cases of tachycardia (heart palpitations), especially when brought about by anxiety and other such causes. It may be used in all heart conditions that are associated with anxiety and tension. Chinese research referred to in Potters Cyclopedia found that it both reduced blood platelet aggregation and decreased levels of blood lipids.

Combinations: May be freely combined in any prescription, especially with Hawthorn.

Description: Found throughout Europe.

Dosage

Infusion: Ppour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–4 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

LOQUAT LEAF

Name: Loquat leaf.

Biological Name: Eriobotryae japonicae Rosaceae.

Other Names: Loquat leaf, pi pa ye.

Parts Used: Leaf.

Remedies For

Antitussive, expectorant, antiemetic. Alleviates coughing, nausea, and belching;

dissolves phlegm. Eliminates phlegm that causes lung heat coughs. This herb dissolves phlegm and is an expectorant.

Dosage

6–15 grams.

Safety

Loquat leaf should not be used for cough caused by cold.

LU DOU

Name: Mung bean.

Biological Name: Phaseoli radiati Leguminosae.

Other Names: Mung bean, Lu Dou.

Parts Used: Bean.

Remedies For

Antipyretic, antihypertensive, antidote to toxic poisonings, nutritive tonic. Mung bean is a nutritious protein food that is used by Oriental herbalists for all hot, inflammatory conditions, ranging from systemic infections to heat stroke to hypertension. Also used for toxic poisoning, including aconite poisoning. Very effective as a soup for heat stroke associated with thirst, irritability, and fever.

Dosage

15–30 grams; 120 grams are cooked with 60 grams of licorice for aconite poisoning.

Safety

Because of their cooling nature, mung beans should be avoided or cooked with warming spices for those with a weak digestion.

LU GEN

Name: Phragmites.

Biological Name: Phragmites communis Gramineae.

Other Names: Phragmites, Lu gen, reed rhizome.

Parts Used: Rhizome.

Remedies For

Diuretic, antibiotic, antiemetic. Phragmites is effective for conditions of the lung involving thick yellow sputum, fever, and thirst. It can also be used for nausea and vomiting associated with stomach heat.

For the Lower Warmer, it is used for damp heat with symptoms of urinary tract infections, such as dark urine, painful urination, and possibly blood in the urine. This is a common herb that resembles bamboo.

Dosage

9–30 grams.

Safety

This herb should not be used when there is weakness in the spleen and stomach caused by cold.

M

MA CHI XIAN

Name: Portulaca.

Biological Name: Portulacae oleraceae Portulacaceac.

Other Names: Portulaca, Ma chi xian.

Parts Used: Leaves and stems.

Remedies For

Anti-inflammatory, demulcent, antibiotic, antiparasitic, nutritive. Cools the blood. This herb is used internally for damp heat with symptoms of toxic dysentery, boils, sores, vaginal discharges, and urinary tract infections, as well as topically for venomous bites and stings.

Dosage

15–60 grams.

Safety

Pregnant women with digestive weakness should limit the use of portulaca because of its cold nature.

MAGNOLIA FLOWER

Latin Name: Magnolia liliflora.

Other Name: Xin yi hua.

A Remedy For

Chinese herbalists use Magnolia Flower as a remedy for clogged sinus and nasal passages. In conjunction with other herbs, such as angelica, mint, and chrysanthemum, it is often recommended for upper respiratory tract infections and sinus headaches, although its effectiveness for these problems has not been scientifically confirmed.

What It Is; Why It Works

It's actually the buds—not the fully developed Magnolia blooms—that are used medicinally. In laboratory studies, the buds seem to retard certain fungal growths, but their decongestant effect remains unexplained.

A related species, Magnolia officinalis, has also earned a place in the traditional Chinese pharmacopoeia through the medicinal action of its bark. Called "Hou Po," this Chinese herb is used as a remedy for cramps, gas, bloating, indigestion, vomiting, and diarrhea.

Avoid If...

No known medical conditions preclude the use of Magnolia Flower.

SPECIAL CAUTIONS: MAGNOLIA BUDS HAVE A HAIRY TEXTURE THAT CAN IRRITATE THE THROAT. BE SURE TO RUB THE HERB WITH A COTTON CLOTH OR PLACE IT IN CHEESECLOTH BEFORE MIXING IT INTO A SOLUTION.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Magnolia buds can be found in some Asian markets and western-style health food stores. Choose dry, green buds free of stems or branches.

Typical Dosage

There is no standard dosage on record.

Overdosage

Signs of an overdose include dizziness and red eyes. If you suspect an overdose, seek medical attention immediately.

MALE FERN

Latin Name: Dryopteris filix-mas.

Other Names: Aspidium, Bear's Paw Root, Knotty Brake, Sweet Brake.

A Remedy For

Taken internally, Male Fern root is a potent remedy for bandworms and liver flukes. However, the root is so poisonous that officials do not recommend its use, advising other, less toxic treatments instead. Preparations of Male Fern fronds, which are one-tenth as potent as the root, are applied externally for muscle and nerve pain, earache, toothache, teething, sleeplessness, rheumatism, and sciatica. Their effectiveness has not, however, been verified.

In homeopathic medicine, Male Fern is used for worms and problems with the lymph system.

What It Is; Why It Works

For centuries, until better alternatives were discovered, Male Fern was an accepted treatment for worms. Smoke from the fern was said to drive away serpents, gnats, and "other noisome creatures." Modern research has revealed antiviral properties. The plant is found in temperate zones worldwide.

Avoid If...

Not for children under 4, pregnant women, the elderly, and those with anemia, diabetes, a heart condition, kidney problems, or liver disease.

SPECIAL CAUTIONS: EVEN AT RECOMMENDED DOSES, MALE FERN IS QUITE TOXIC, PRODUCING SIDE EFFECTS SUCH AS DIARRHOEA, NAUSEA, QUEASINESS, SEVERE HEADACHE, AND VOMITING.

Possible Drug Interactions

There are no known drug interactions.

Special Information if you are Pregnant or Breastfeeding

Do not use during pregnancy.

How to Prepare

Check with your doctor. Numerous alternatives are now available.

Typical Dosage

Remember, therapeutic dosages often prove toxic.

Male Fern Extract: For adults, the dose is 6 to 8 grams once daily; for children, give 4 to 6 grams. Wait several weeks before re-treatment.

Dried Extract: The maximum dose is 3 grams once daily. Strengths of commercial preparations may vary. Follow the manufacturer's labelling whenever available.

Overdosage

Overdosage can lead to heart, kidney and liver damage, mental disorders, spasms, paralysis, and vision damage, including blindness. Fatalities have occurred, particularly among children. If you suspect an overdose, seek emergency medical attention immediately.

MATÉ

Latin Name: Ilex paraguariensis.

Other Names: Jesuit's Tea, Paraguay Tea, Yerba Maté.

A Remedy For

—Fatigue

—Heart palpitations

—Irregular heartbeat

—Kidney and bladder stones

—Urinary tract infections

—Weak heart

Maté is also used as a treatment for mental and physical fatigue and as a diuretic for flushing water from the body.

What It Is; Why It Works

Tea made from this herb is very popular in South America, the only source of the plant. Maté is an evergreen with white flowers and red fruit. Its medicinal parts are the dried or roasted leaves, which have proven to be a rich source of caffeine. Like coffee, Maté stimulates the central nervous system and has a diuretic effect. It also increases the force of heart contractions, affects heart rhythm, and breaks down sugars and fats in the body.

Avoid If...

You should avoid Maté if you are sensitive to caffeine or have a health condition that is aggravated by caffeine.

Special Cautions

Maté poses no problems when taken at normal dosage levels. However, high doses of caffeine taken regularly can lead to restlessness, irritability, insomnia, palpitations, dizziness, vomiting, diarrhoea, loss of appetite, and headache.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

Many doctors recommend limiting caffeine intake during pregnancy to the equivalent of 1 cup of coffee a day. Drinking the equivalent of 4 cups or more per day could slow the baby's development.

How to Prepare

Maté can be made into a tea by pouring boiling water over one-half teaspoonful (2 grams) of crushed Maté. Steep for 5 to 10 minutes then strain. You will find that the tea tastes better and is more stimulating if it is steeped only a short time.

Maté is available alone and in various tea combinations. It's also an ingredient in some commercial drinks.

Typical Dosage

Maté is taken orally. The usual daily dosage is 3 grams (about three-quarters of a teaspoonful).

Overdosage

Massive doses of caffeine can cause stiffness, muscle spasms, and heart irregularities, but are unlikely to be life-threatening.

(The lethal dosage is the equivalent of 75 cups of coffee at one sitting.) Nevertheless, if you suspect an overdose—especially in a child—seek medical attention immediately.

MATHANGA

Name: Pumpkin.

See Also: Pumpkin Seeds.

Biological Name: Cucurbita popo L. GOURD FAMILY Cucurbitaceae.

Other Names: Field Pumpkin, Squash, Mandarin: Nan Gua Zi; Japanese: Nankashi; Korean: Namgwarha Indian: Matthanga.

Parts Used: All parts of the pumpkin and squash are edible including the flowers of the plant

History

Pumpkins were an important food throughout the Americas long before Colonial times. They have been cultivated in Central America for at least 9,000 years, and remains of the fruit have been found in the United States in ancient Southwestern cliff dwellings.

Pumpkin is used all over the world. Botanically, a pumpkin is a squash. The name "pumpkin" goes back to the Greek word "pepon," meaning ripe or mellow or "sun ripened." Pumpkin can be served as a boiled or baked vegetable and as a filling for pies or in custards.

Habitat: Waste places, open fields.

Range: Native to tropical America. Pumpkin has been cultivated almost everywhere in the world, including North America.

Identification: An annual vine with tendrils and a creeping prickly stem reaching 30 feet in length. Large, rough, dull green leaves, 1/2–1 foot wide, are triangular with three to five lobes. Bright yellow funnel-shaped flowers (June–August) are followed by orange fruit that contains numerous flat white seeds.

How to Select Pumpkins

Buy pumpkins that are heavy for their size, hard on the surface, clean, and free of cuts, cracks, and soft spots.

For cooking purposes, the small sugar pumpkins averaging 7 lbs. or so are best. A local farm stand may be your best source for small pumpkins.

Therapeutic Value: Like all orange-pigmented vegetables, pumpkins are rich in beta carotene (the plant form of vitamin A). A half cup of canned or baked pumpkin provides over 450 percent of the adult Recommended Dietary Allowance (RDA) of Vitamin A. Studies have shown that this antioxidant may help prevent some forms of cancer. Pumpkins are also shown to help fight colds, immune diseases, and night blindness.

Pumpkins are high in vitamin C for all-around tissue building and healing as well as 275 mg of potassium for a healthy heart.. A half-cup serving supplies over 15 percent of the RDA of Vitamin C. Both squash and pumpkin contain a good amount of fiber that is a defense against the development of tumors.

A half cup of pumpkin has only 40 calories. Pumpkins are very low in fat and are high in fiber. When you boil pumpkins, they absorb water and lose some nutrients. We suggest you bake pumpkins for optimum retention of nutrients.

In a report published by Graham A. Colditz et al. in the American Journal of Clinical Nutrition (January 1985), numerous previous studies were cited that "have shown that cancer risk is inversely related to the consumption of green and yellow vegetables. "Particularly mentioned were lung, gastrointestinal, bladder, and colon cancers. The report was based on a study of more than 1,200 Massachusetts residents 66 years of age or older and demonstrated that those with the highest intake of carotene-containing vegetables had the lowest incidence of cancer.

The best part of pumpkin from nutritional point of view is the part most of throw out when we carve pumpkins for the Jack O' Lantern—viz., the seeds. The nutritional and healing value of the seeds are covered elsewhere.

Nutrient Content of 1 Cup Canned Solid-Pack Pumpkin (About 9 oz., 245 grams)

—Calories 49

—Protein 2 g

—Saturated Fat 0 g

—Cholesterol 0 mg

—Carbohydrate 12 g

—Calcium 37 mg

—Phosphorus 74 mg

—Iron 1.4 mg

—Sodium 2 mg

—Potassium 564 mg

—Dietary fiber 4 g

—Vitamin A 265 RE

—Thiamin 0.08 mg

—Riboflavin 0.19 mg

—Niacin 1.0 mg

—Vitamin C 12 mg

In the Kitchen: Cooking Pumpkin.

Squash and pumpkins will keep quite well for a month or more in a cool, dry, airy place, such as an unheated attic.

Baking is about the easiest cooking method for squash and pumpkins. Don't cook these vegetables cut sides down, because this will steam them and you'll lose the nutty flavor. (For the same reason, don't cook them in the micro-wave oven.) Instead, bake them cut sides up.

After baking pumpkins, turn them upside down to drain, since they can be quite watery. When you want to use fresh pumpkin in pies, put the mashed vegetable in a saucepan over low heat and cook, stirring occasionally, until the desired dense consistency is reached.

Safety

No safety issues have been reported.

See Safety warning for pumpkin seeds.

MAYPOP

Name: Passion Flower.

Biological Name: Passiflora incarnata Passifloraceae.

Other Names: Passion Flower, Maypop.

Parts Used: Leaves and whole plant.

Active Compounds

Alkaloids; harmine, harman, harmol, harmaline, harmalol, and passaflorine Flavonoids; apigenin and various glycosides, homoorientin, isovitexin, kaempferol, luteolin, orientin, quercitin, rutin, saponaretin, saponarin and vitexen.

The flavonoids in passion flower are the primary constituents responsible for its relaxing and anti-anxiety effects.

European pharmacopoeias typically recommend passion flower products containing no less than 0.8% total flavonoids. The European literature involving passion flower recommends it primarily for anti-anxiety treatment; in this context, it is often combined with valerian, lemon balm, and other herbs with sedative properties.

History

Medical use of the herb did not begin until the late nineteenth century in the United States. Passion flower was used to treat nervous restlessness and gastrointestinal spasms.

The effects of passion flower were believed to be primarily on the nervous system. Its effects were particularly touted for those with anxiety due to mental worry and overwork.

Remedies For

Nervine, hypnotic, anti-spasmodic, anodyne, hypotensive.

Passiflora has a depressant effect on Central Nervous System activity and is hypotensive; they are used for their sedative and soothing properties, to lower blood pressure, prevent tachycardia and for insomnia.

The alkaloids and flavonoids have both been reported to have sedative activity in animals.

Many of the flavonoids, such as apigenin, are well-known for pharmacological activity, particularly anti-spasmodic and anti-inflammatory activities. It is the herb of choice for treating intransigent insomnia. It aids the transition into a restful sleep without any 'narcotic' hangover. It may be used wherever an anti-spasmodic is required, e.g. in Parkinson's disease, seizures and hysteria.

It can be very effective in nerve pain such as neuralgia and the viral infection of nerves called shingles.

It may be used in asthma where there is much spasmodic activity, especially when there is associated tension.

Combinations: For insomnia, it will combine well with Valerian, Hops and Jamaican Dogwood.

Description

The plant is native to North, Central, and South America. While primarily tropical, some of its 400 species can grow in colder climates. The name passion flower dates back to the seventeenth century.

The mystery of the beautiful blossom out of the unassuming bud was compared to the Passion of Christ. The leaves, stems, and flowers are used for medicinal purposes.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and let infuse for 15 minutes. Drink a cup in the evening for sleeplessness, and a cup twice a day for the easing of other conditions.

Tincture: Take 1–4 ml of the tincture and use the same way as the infusion. The recommended intake of the dried herb is 4–8 grams three times per day. Many European products combine passion flower with other sedative herbs to treat mild to moderate anxiety.

Safety

Used in the amounts listed above, passion flower is generally safe and has not been found to negatively interact with other sedative drugs. However, some experts suggest not using passion flower with MAO-inhibiting antidepressant drugs. Passion flower has not been proven to be safe during pregnancy and lactation.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

MEADOW ANEMONE

Name: Pasque Flower.

Biological Name: Anemone pulsatilla Ranunculaceae.

Other Names: Pasque Flower, Pulsatilla, Wind Flower, Meadow Anemone.

Parts Used: Aerial parts.

Active Compounds

—Lactones; protoanemonin, which dimerizes on drying to anemonin, ranunculin.

—Triterpenoid saponins.

—Miscellaneous; anemone camphor, tannins, volatile oil.

Remedies For

Nervine, anti-spasmodic, antibacterial. Pasque Flower is an excellent relaxing nervine for use in problems relating nervous tension and spasm in the reproductive system.

It may be used with safety in the relief of painful periods (dysmenorrhoea), ovarian pain and painful conditions of the testes. Used to reduce tension reactions and headaches associated with them. Also will help in the treatment of insomnia and general over-activity.

The antibacterial actions give this herb a role in treating infections that affect the skin, especially boils. It is similarly useful in the treatment of respiratory infections and asthma. The oil or tincture will ease earache.

Combinations: For painful periods it will combine well with Cramp Bark. For skin conditions it combines with Echinacea.

Description

Pasque flower is a native of Europe and parts of Russia. It is cultivated elsewhere.

Dosage

Infusion: A cup of boiling water onto l/2–1 teaspoonful of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day or when needed.

Tincture: 1–2 ml 3 times a day.

Safety

CAUTION: DO NOT USE THE FRESH PLANT.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

MILK HEDGE

Name: Milk Hedge.

Biological Name: Euphorbia neriifolia, Euphorbia lingularia Euphorbiaceae.

Other Names: Milk Hedge, Snuhi, Thohar Ilakkalli, Suchi, Sehund.

Description: This leafless herb is found in India.

Parts Used: Stem juice, root.

MEDICINAL APPLICATIONS

Actions

—Juice-purgative, expectorant

—Locally-rubefacient

—Root-antispasmodic

Uses

—asthma

—cough

—earache

—edema

—glandular swellings

—hemorrhoids

—liver and spleen disorders

—ophthalmia

—skin diseases

—syphilis

—ulcers and scabies

—warts

The juice of this herb is used as an antidote to snake poison and in the cure of hydrophobia.

Dosage

Juice, powder, pill, syrup, paste, tincture, decoction, salve

Safety

This herb is very irritant. Do not use except under the supervision of an Ayurvedic specialist. No other information available.

MINERAL PITCH

Name: Mineral Pitch.

Biological Name: Asphaltum.

Other Names: Mineral Pitch, Vegetable Asphalt, Shilajit, Shilajita.

Guj, Jews' pitch, Kalmadam, Perangyum, Relyahudi, Silaras.

Description

Silajit is a compact mass of bituminous substance ejected from crevices of rocks in the lower Himalayas, and Nepal, during hot weather. It consists of vegetable organic matter, composed of dark red, gummy matrix, interspersed with vegetable fibers and earthy matter.

Silajit has a bitter taste. It smells like the cow's stale urine. Monkeys use this natural remedy for various health ailments. They stay healthy and live a long time.

—There are four varieties of Silajit:

—Gold Silajit (red color)

—Silver Silajit (white color)

—Copper Silajit (blue color)

—Iron Silajit (blackish brown color)

The black silajit is the variety used for healing.

Parts Used: The oozing from the rocks

MEDICINAL APPLICATIONS

Action

alterative, anodyne, antiphlogistic, antiseptic, aphrodisiac, cholagogue, disinfectant, diuretic, expectorant, intestinal antiseptic, mildly laxative, lithotriptic, parasiticide, rejuvenative, respiratory stimulant, tonic

Uses

—asthma

—cystitis

—diabetes

—dysuria

—edema
—epilepsy
—gall stones
—hemorrhoids
—insanity
—jaundice
—kidney
—obesity
—sexual debility
—skin diseases
—menstrual disorders
—parasites

Charaka says that "there is hardly any curable disease which cannot be controlled or cured with the aid of Silajit".

According to GKN Nair and N. Mohanan, authors of "Medicinal Plants of India," Silajit is specially employed in genito-urinary diseases and in diabetes. It is used in gall stones, jaundice, enlarged spleen, dyspepsia, worms, digestive disorders, piles, adiposity, anasarca and anuria.

Silajit is employed in cases of renal stone, renal and bladder calculi, hysteria, neurasthenia, epilepsy, insanity and nervous diseases. It is used in amenorrhoa, dysmenorrhea, menorrhagia, scrofula, tuberculosis, phthisis, leprosy, eczema, elephantiasis, anaemia, anorexia, biliary conjestion, chronic bronchitis. asthma, fracture of bones etc. Silajit is markedly effective in the treatment of various complications arising from diabetes."

Silajit is an effective tonic for anemia and general debility. It causes uterine contractions and promotes expulsion of the fetus. It is used as an antiseptic in parasitic diseases of the skin; a paste is locally applied to relieve rheumatic pain in joints, and in paralysis.

Dosage

Powder, with milk. 1 oz or more a day for severe diseases; 1/4–1 tsp.–3 times daily, otherwise.

Safety

CAUTION: DO NOT USE WITH HIGH URIC ACID COUNT, OR WITH FEBRILE DISEASES.

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

MORNING GLORY SEEDS

Name: Morning glory seeds.

Biological Name: Pharbitidis purpurea Convolvulaceae.

Other Names: Morning glory seeds, Pharbitidis, Qian niu zi.

Parts Used: Seed.

Remedies For

Laxative, diuretic, antiparasitic. This herb is a powerful laxative, driving out stagnation of water, food, and damp heat conditions, as well as eliminating intestinal worms. It is also effective when there is stagnation of phlegm causing cough and wheezing.

Dosage

3–9 grams in decoction.

1.5–3 grams used alone as a powder.

Safety

Pharbitidis should not be used by pregnant women and should be avoided by those with deficiency of the spleen or stomach.

MOUTAN PEONY

Name: Moutan Peony.

Biological Name: Moutan radicis, Paeonia suffruticosa Ranunculaceae.

Other Names: Moutan peony, tree peony.

Parts Used: Root bark.

Remedies For

Anti-inflammatory, antibacterial, antipyretic, analgesic. Invigorates the blood, clears blood stagnation. This herb is most effective in warm febrile diseases when there is blood in the sputum or nose-bleeds, or when there is excessive menstrual bleeding. It is also used for amenorrhea, tumors, carbuncles, or blood stasis due to traumatic injury. It can be used topically for non-draining sores or abscesses.

Dosage

3–9 grams.

Safety

Moutan peony should not be used by women who are either pregnant or experiencing excessive menstrual flow. It should be avoided when there are cold signs or yin deficiency with excessive sweating.

MULBERRY TWIG

Name: Mulberry twig.

Biological Name: Mori albae Ramulus Moraceae.

Other Names: Mulberry twig, Sang zhi.

Parts Used: Twig.

Remedies For

Antirheumatic, diuretic, antispasmodic.

The twigs of the white mulberry tree are used to promote circulation, dispel dampness, relieve wind and spasms, and treat arthritic and rheumatic pains of the extremities. The herb has also been used for high blood pressure and edema.

Dosage

9–15 grams.

MUSTA

Name: Nutgrass.

Biological Name: Cyperus rotundus Cyperaceae.

Other Names: Nutgrass, Musta, Mustaka, Mutha, Mustaka, Muttanga, Matha.

Description

This grass-like herb is found in South India. It has tuberous roots or rhizomes that are fragrant. It had been mentioned in Sahasrayoga.

Parts Used: Rhizome.

MEDICINAL APPLICATIONS

Action

Alterative, anthelmintic, anti-fungal, anti-parasitic, anti-rheumatic, antispasmodic, aphrodisiac, astringent, carminative, demulcent, diaphoretic, diuretic, emmenagogue, galactagogue, refrigerant, stimulant, stomachic, tonic.

Uses

—(high) blood pressure

—bloody stool, urine, and vomiting blood

—breast tumors
—candida
—colds and flu
—colic
—convulsions
—diarrhea
—dysentery
—dysmenorrhea
—fevers
—gastritis
—indigestion
—malabsorption
—mental health (moodiness, and depression)
—menstrual disorders (pain, cramps, and PMS)
—menopause
—palpitation
—parasites
—vomiting

The decoction of the roots and tubers are excellent antidote to all poisons. A paste of the fresh tubers applied to the breasts acts as an effective galactagogue. The root is often used for developing high memory. This herb also harmonizes the liver, spleen, and pancreas.

Dosage

Decoction, powder

Safety

CAUTION: CONSTIPATION.

No further information about the safety of this herb is available.

USE CAUTION. AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

N

NASTURTIUM

Latin Name: Tropaeolum majus.

Other Name: Indian Cress.

A Remedy For

—Bronchitis

—Cough

—Urinary tract infections

What It Is; Why It Works

This vine-like plant creeps and climbs for up to 15 feet, putting forth distinctive orange flowers with flame-red stripes. The flowers are fragrant, and the leafy parts of the plant smell and taste like cress. Nasturtium is native to the warmer regions of South America, but now grows in the Mediterranean region as well. One variety has been used medicinally since 1684.

In laboratory tests, Nasturtium stops the growth of germs and fungi. Applied to the skin, it improves circulation.

Avoid If...

Do not give Nasturtium to infants or young children, and do not take it if you have stomach ulcers or kidney disease.

Special Cautions

High doses of the fresh plant or its oil can irritate the lining of the digestive tract. Prolonged, intensive contact with the fresh plant can also irritate the skin.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

You may find preparations of the plant's seeds or leaves.

Typical Dosage

No guidelines have been published. Follow the supplier's instructions when available.

Overdosage

See "Special Cautions" above.

NEEM

Name: Neem.

Biological Name: Melia azadirachta, Azadiracta Indica, Meliaceae, Azedarach.

Other Names: Neem, Nimba, Nimb Indian Lilac, Bead Tree, Holy Tree, Margosa Tree, Nim, Persian Lilac, Pride of China, Ravipriya, Veppu.

Description

This tree is found in the Western Himalayas of India, and in Iran. It is cultivated in other parts of India and the tropical regions of the world such as Indonesia, Australia, and West Africa. It is considered to be a vary valuable herb in Ayurvedic medicine and for a variety of folk applications.

Parts Used: All.

MEDICINAL PROPERTIES

Action

—Root bark—antiperiodic, astringent, tonic.

—Bark of tree—astringent, antiperiodic, antiviral, bitter, tonic, vermifuge.

—Leaves—antiviral, discutient, emrnenagogue.

—Flowers—stimulant, stomachic, tonic.

—Fruit—anthelmintic, purgative, emollient.

—Juice—anthelmintic.

—Oil extracted from the nut-antiseptic, insecticide, local stimulant.

Uses

—arthritis
—blood—purifies and detoxifies
—bronchitis
—cough
—diabetes
—drowsiness
—eczema
—fever
—jaundice
—leukorrhea
—malaria
—nausea
—obesity
—parasites
—rheumatism
—skin diseases
—syphilis
—thirst
—tumors
—vomiting
—worms

This herb is used in inflammatory and febrile diseases. It is also used for worm infestation. It is used for a variety of conditions in Ayurvedic Medicine, singly, and in combination.

Dosage

Infusion, decoction, powder, medicated ghee, or oil.

Safety

No information about the safety of this herb is available. Use caution. Ayurvedic herbs are often taken in combination with others to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

NOTOGINSENG ROOT

Latin Name: Panax notoginseng.

Other Names: San Qi, Pseudoginseng Root.

A Remedy For

In Chinese medicine, Notoginseng Root is a favorite remedy for both internal and external bleeding. It is taken internally to quell nosebleeds and blood in the stools, urine, or lungs. Applied externally, it's used to relieve pain and swelling from fractures, sprains, bruises, cuts, and wounds. It's also occasionally used as a treatment for acute attacks of Crohn's disease, an inflammatory bowel condition.

Recently, Notoginseng has also shown promise as a treatment for angina (chest pain due to poor circulation in the heart muscle) and high blood pressure.

What It Is; Why It Works

By Chinese standards, Notoginseng is a relative newcomer, first appearing in the Compendium of Materia Medica published by Li Shizen in 1578. He pronounced the root "more valuable than gold." Modern clinical trials conducted in China appear to confirm that Notoginseng does indeed speed the clotting process. It also seems to combat the effects of hardening of the arteries, improving circulation to the heart and relieving high blood pressure.

Native to China, Notoginseng is grown commercially in the southern and central regions of the country. The portion of the plant used in remedies is the root, dug up before the plant flowers or after the fruit has ripened.

Avoid If...

See "Special Information If You Are Pregnant or Breastfeeding."

Special Cautions

At customary dosage levels, Notoginseng Root poses no known risks.

Possible Drug Interactions

No drug interactions are known.

Special Information if you are Pregnant or Breastfeeding

Notoginseng Root has caused miscarriage. Avoid it during pregnancy.

How to Prepare

Notoginseng Root is sold in bulk as loose, dried roots and in tablet form. It can be made into a liniment for swelling and pain, and can be used in compresses to help heal wounds and bruises.

Typical Dosage

There are no standard guidelines on record.

Overdosage

No information on overdosage is available.

O

OAK BARK

Name: Oak Bark.

Biological Name: Quercus robur Fagaceae.

Other Names: Oak Bark.

Parts Used: Bark (The young bark is carefully pared from the trunk or from branches which are not more than 4 inches thick.)

Active Compounds

Tannins 15–20%, consisting of phlobatannin, ellagitannins and gallic acid.

Remedies For

Astringent, anti-inflammatory, antiseptic. Oak Bark may be used wherever an effective astringent is called for, *e.g.*, diarrhea, dysentery or hemorrhoids. Because of its high percentage of astringent tannins it might be too strong in some situations. As a gargle, the decoction can be used for tonsillitis, pharyngitis and laryngitis. Used as an enema for the treatment of hemorrhoids and as a douche for leucorrhoea. Primarily indicated for use in acute diarrhea, taken in frequent small doses.

Combinations: It is often given with Ginger before meals.

Dosage

Decoction: Put 1 teaspoonful of the bark in a cup of water, bring to the boil and simmer gently for 10–15 minutes. This can be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

OATS

Name: Oats.

Biological Name: Avena sativa Gramineae.

Other Names: Oats, wild oats.

Parts Used: Seeds and whole plant.

Active Compounds

—Proteins; prolamines known as avenins.

—C-glycosyl flavones.

—Avenacosides, which are spirostanol glycosides.

—Fixed oil, Vitamin E, starch.

History

In folk medicine, oats were used to treat nervous exhaustion, insomnia, and "weakness of the nerves." A tea made from oats was thought to be useful in rheumatic conditions and to treat water retention. A tincture of the green tops of oats was also used to help with withdrawal from tobacco addiction. Oats were often used in baths to treat insomnia and anxiety as well as a variety of skin conditions, including burns and eczema.

Remedies For

Nervine tonic, anti-depressant, nutritive, demulcent, vulnerary.

Useful for

—anxiety

—eczema

—high cholesterol

—high triglycerides

—insomnia

—nicotine withdrawal

One of the best remedies for feeding the nervous system, especially when under stress. Oats is considered a specific in cases of nervous debility and exhaustion when associated with depression. May be used with most of the other nervines, both relaxant and stimulatory, to strengthen the whole of the nervous system. Also used in general debility. The high levels of silicic acid in the straw is taken advantage of in its use as a remedy for skin conditions, especially in external applications.

Combinations: For depression it may be used with Skullcap and Mugwort.

Description

The common oat used in herbal supplements and foods is derived from wild species that have since been cultivated. For herbal supplements, the green or rapidly dried aerial parts of the plant are harvested just before reaching full flower. Oats are now grown worldwide.

Dosage

Infusion: Pour a cup of boiling water to 1–3 teaspoonfuls of the dried straw and leave to infuse 10–15 minutes. Drink three times a day.

Tincture: Take 3–5 ml three times a day.

Bath: A soothing bath for use in neuralgia and irritated skin conditions can be made: 1 pound of shredded straw is boiled in 2 quarts of water for half an hour. The liquid is strained and added to the bath, or the cooked rolled oats may be put into a muslin bag and used to bath with.

Safety

Oats are not associated with any adverse effects. If you are suffering from gluten sensitivity (celiac disease), use oats with caution.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

OLD MAN'S BEARD

Name: Usnea.

Biological Name: Usnea barbata.

Other Names: Usnea, Old man's beard.

Parts Used: The herb.

Active Compounds

Usnic acid gives usnea its bitter taste and also acts as an antibiotic. Usnea also contains mucilage, which can be helpful in easing irritating coughs. Preliminary test-tube studies suggested an anticancer activity for usnic acid; however, this effect has not been sufficient to warrant further investigation.

History

Because of its bitter taste and ability to stimulate digestion, usnea was historically used to treat indigestion. It was also reportedly used over 3,000 years ago in ancient Egypt, Greece, and China to treat infections.

Remedies For

Useful for the treatment of

—Common Cold/Sore Throat

—Cough

—Infection

Description

Usnea is not a plant but a lichen—a symbiotic relationship between an algae and a fungus. The entire lichen is used. Usnea looks like long, fuzzy strings hanging from trees in North American and European forests, where it grows.

Dosage

Usnea, in capsule form, can be taken in the amount of 100 mg of the lichen three times per day.

Tincture can be taken in the amount of 3–4 ml three times per day.

Safety

There are no known side effects of usnea, and it has not been reported to interfere with the action of common medications. It is considered safe for use in children.

Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

OLIVE LEAF

Latin Name: Olea europaea.

A Remedy For

Olive Leaf is sometimes used to treat high blood pressure. There is, however, no firm evidence of its effectiveness.

What It Is; Why It Works

Use olive oil as a drug? It seems improbable, but this common salad and cooking oil was indeed once prescribed for liver and gallbladder problems—until it was discovered that the "remedy" was triggering cramps in gallstone patients.

Today, only Olive Leaf is thought to have any medicinal potential. In animal tests, it has lowered blood pressure, steadied the heartbeat, and relieved spasms. Unfortunately, its value as a remedy in humans remains to be proven.

Despite its lackluster performance as a drug, the olive has been held in high esteem since ancient times. According to the Bible, Moses exempted young men from fighting in the army if they worked at cultivating olives. In many classical writings, olive oil is a symbol of goodness and purity, and it was burnt in sacred temple lamps. In the ancient Olympics, it was the olive leaf that formed the victors' crowns.

Avoid If...

Olive Leaf can be used under any medical conditions. Avoid the oil, however, if you have gallstones.

Special Cautions

At customary dosage levels, Olive Leaf presents no risks.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

To prepare an Olive tea, pour 5 ounces of hot water over 7 to 8 grams (about 2 teaspoonfuls) of crushed Olive Leaf and steep for 30 minutes.

Typical Dosage

Drink 3 to 4 cups of Olive tea daily.

ONION

Latin Name: Allium cepa.

A Remedy For

—Appetite loss

—Bronchitis

—Colds

—Cough

—Fever

—Hardening of the arteries

—High blood pressure

—Indigestion

—Sore throat

—Tendency to infection

In folk medicine, Onion has also been used for whooping cough, chest pain (angina), gallbladder complaints, dehydration, menstrual problems, parasitic infections, and diabetes. It is applied externally for insect bites, wounds, mild burns, warts, boils, and bruises. These folk uses all remain unproven.

What It Is; Why It Works

It's the same ingredient that brings tears to your eyes that lends Onions their ability to fight disease. This sulfur compound thins the blood and helps prevent dangerous clots while lowering blood pressure and possibly reducing cholesterol levels. Onions also possess the ability to kill a wide variety of germs. And, for asthma victims, Onion extract may even relieve allergy-induced bronchial constriction.

Avoid If...

There are no known medical conditions that preclude the use of Onion.

Special Cautions

Taking large quantities can cause stomach problems. Frequent hand contact may cause eczema (a weeping, itching rash).

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

You can make a medicinal oil by crushing an Onion and stirring in an equal amount of fatty oil. Let the mixture stand for 48 hours, then filter the oil.

A popular form of Onion extract is made with pressed Onion juice and syrup, using 500 grams (1 pound, 1 ounce) of Onions, 500 grams (1 pint) of water, 100 grams (3 ounces) of honey, and 350 grams (12 ounces) of sugar. You can prepare an Onion tincture by soaking 100 grams (3 ounces) of minced Onions in 300 grams (10 ounces) of alcohol for 10 days.

Typical Dosage

The usual oral dosage is

Onion Tincture: 4 to 5 teaspoonfuls daily.

Onion Syrup: 4 to 5 tablespoons daily.

Fresh Onion: 50 grams (12/3 ounces) daily.

Dried Onion: 20 grams (two-thirds ounce) daily.

For external use, apply slices directly to the skin, cover the affected area with a juice-soaked cloth, or spread juice across the area. When using a commercial preparation, follow the manufacturer's labelling. Strengths may vary.

OREGON ALDER

Name: Red Alder.

Biological Name: Alnus rubra.

Other Names: Oregon alder, red alder.

Parts Used: Bark, leaves.

Remedies For

Astringent, bitter, emetic, hemostatic Fresh alder bark will cause vomiting, so use dried bark except for emetic purposes.

A decoction of the bark makes a good gargle for sore throat and pharyngitis. The powdered bark and the leaves have been used as an internal astringent and tonic, and the bark also as an internal and external haemostatic against hemorrhage. Boiling the inner bark in vinegar produces a useful external wash for lice and for skin problems such as scabies and scabs. It can be used to clean your teeth.

Description

Red alder grows as a shrub or tree. It has elliptic- ovate leaves that are dark green on top and rusty-haired underneath. It is found in evergreen and redwood forests from Northern California to Alaska.

Dosage

Decoction: Boil 1 tsp. bark or leaves in 1 cup water. For internal use, take 1 to 2 cups a day, in mouthful doses.

Tincture: A dose is from 1/2 to 1 tsp.

Powder: A dose is from 8 to 12 grains.

OREGANO

Latin Name: Origanum vulgare.

Other Names: Mountain Mint, Wild Marjoram, Winter Marjoram, Wintersweet.

A Remedy For

Oregano is considered a remedy for respiratory problems such as coughs and bronchitis, although there is no conclusive proof of its effectiveness. Unverified uses in folk medicine include treatment of bloating, gas, urinary tract problems, painful menstruation, rheumatoid arthritis, swollen glands, and lack of perspiration.

What It Is; Why It Works

It's difficult to think of a common kitchen herb like Oregano as a medical remedy, but it has in fact been used as a drug since the time of the ancient Greeks and Chinese. In China, doctors prescribed it to relieve fever, vomiting, diarrhea, jaundice, and itchy skin, while the Greeks made compresses from the leaves to treat sores and aching muscles. The primary ingredients in Oregano are thymol and carvacrol, which are also found in thyme. These compounds, researchers have found, help loosen phlegm in the lungs and relieve spasms in the bronchial passages.

Many commercial cough remedies, including cough drops and skin rubs such as Vicks VapoRub, contain thymol.

Harvested during the flowering season and dried on the field or under a roof, Oregano has bright purple flowers and an aromatic scent. Its medicinal value lies in the oil found in its leaves.

Avoid If...

No known medical conditions preclude the use of Oregano.

SPECIAL CAUTIONS: AT CUSTOMARY DOSAGE LEVELS, OREGANO POSES NO PROBLEMS.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

You can make an Oregano tea by pouring 1 cup of boiling water over 1 heaping teaspoon of the dried herb, steeping for 10 minutes, then straining. The tea may be sweetened with honey.

To make an additive for the bath, pour 1 quart of water over 100 grams (31/3 ounces) of Oregano, steep for 10 minutes, strain, and add to a full bathtub.

Typical Dosage

Sweetened Oregano tea may be taken internally as needed. The unsweetened tea may be used as a gargle or mouthwash.

P

PAPAYA

Latin Name: Carica papaya.

Other Names: Melon Tree, Papaw.

A Remedy For

Although juice from Papaya leaves and fruit has been used as a treatment for digestive disorders and intestinal worms, its effectiveness for these problems has not been conclusively proven.

In Asian medicine, Papaya has also been used for constipation and leprosy.

What It Is; Why It Works

The Papaya tree, which reaches a height of 12 to 25 feet, originated in central America, but is now cultivated in the tropics worldwide. It is prized for its large, yellow, melon-flavored fruits.

Papain, an enzyme in Papaya, is one of the active ingredients in ointments (Accuzyme, Panafil) prescribed for treatment of severe wounds and skin ulcers. Papain has the unique ability to dissolve dead tissue without damaging living cells. (It is also used as a meat tenderizer.)

Avoid If...

Do not take Papaya preparations during pregnancy.

Special Cautions

If you have a bleeding disorder, Papaya extracts could aggravate it. Allergic reactions are also a possibility.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

Remember, Papaya extracts should be avoided during pregnancy.

How to Prepare

Papain ointments for wound treatment are available only by prescription.

Typical Dosage

Follow the manufacturer's directions whenever available.

Overdosage

There is no information available.

PARVARA

Name: Red Coral.

Biological Name: Corallium rubrum.

Other Names: Red Coral, Parvara, Praval.

Description: Corals are found in oceans, seas, and gulfs.

Parts Used: Shell.

MEDICINAL APPLICATIONS

Action

Antacid, antibilious, astringent, diuretic, emetic, laxative, tonic

Uses

—asthma

—bilious headache

—chronic bronchitis

—carbuncles

—coughs

—debility

—dyspepsia

—fever

—giddiness

—gonorrhea

—headaches

—pulmonary tuberculosis

—scrofula

—spermatorrhea

—urinary diseases

—vertigo

—vomiting

—wasting

Dosage

Ash powder.

Safety

No information about the safety of this herb is available.

Use Caution: Ayurvedic herbs are often taken in combination with others to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

PATCHOULI

Latin Name: Pogostemon cablin.

Other Names: Putcha-Pat, Patchouly.

A Remedy For

In Asian and Indonesian folk medicine, Patchouli is used for digestive disorders. It is also used as a remedy for dry skin, wrinkles, dandruff, oily skin and scalp, fungal infections, and insect bites.

Aromatherapists believe that in high doses, Patchouli acts as a stimulant and an aphrodisiac, while in lower doses, it has a calming effect and can be used as a sedative. There is however, no evidence to confirm any of these claims.

What It Is; Why It Works

The fragrant Patchouli plant grows in tropical areas of the world. The oils distilled from its leaves have a very rich spicy odor, which is said to improve with age. This oil is prized by perfumers and makers of soaps and sachets.

Laboratory studies show that Patchouli does have some antibacterial and antifungal properties, perhaps justifying its use for skin problems such as acne and athlete's foot.

Avoid If...

There are no known medical conditions that preclude the use of Patchouli.

Special Cautions

Never take essential oils internally. They are extremely potent and can be poisonous.

Possible Drug Interactions

No interactions are known.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

The essential oil is prepared and sold commercially. The best Patchouli oil is extracted from the leaf of the plant soon after harvest.

Typical Dosage

Use according to package instructions.

Overdosage

No information on overdosage is available.

PELLITORY OF THE WALL

Name: Pellitory of the Wall.

Biological Name: Parietaria diffusa Urticaceae.

Other Names: Pellitory of the Wall.

Parts Used: Aerial parts.

Active Compounds

—Flavonoids; 3-glucosides & 3-rhamnosides of quercitin, kaempferol & isorhamnetin; 3-sophorosides of quercitin & kaempferol; 3-neohesperidosides of kaempferol & isorhamnetin

—Glucoproteins

—Bitter principle

—Tannin.

Remedies For

Diuretic, demulcent. Pellitory of the Wall may be used in the treatment of any inflammation of the urinary tract and especially where soothing of inflammation is needed. Used for cystitis and pyelitis. It is a good general diuretic which is used to relieve water retention where it is due to kidney-based causes. Used in the treatment of kidney stone or gravel.

Combinations: It combines well with Parsley Piert, Buchu, Bearberry or Juniper.

Dosage

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

PEONY

Latin Name: Paeonia officinalis

A Remedy For

Peony is prescribed as a remedy for hemorrhoids and rheumatism, but its effectiveness remains unproven. Other unverified uses include treatment of diseases of the skin and mucous membranes, gout, and respiratory ailments. Peony root has also been used, without substantiation, for chronic weakness and fatigue, nerve pain, migraine, allergies, excitability, epilepsy, and whooping cough; and the flower has been used to induce vomiting and abortion. In Asian medicine, Peony is considered a remedy for menstrual disorders, discolorations on the skin, bloody vomiting, and seizures. Homeopathic practitioners use it for ulcers and hemorrhoids.

What It Is; Why It Works

The Peony has inspired more than its share of superstition. Some claimed it was of divine origin, others that it came from the moon, or that it averted evil spirits and tempests. The ancient Greek philosopher Theophrastus advised gathering Peony only at night, for if a woodpecker spies a man gathering it, "he is in danger [of losing] his eyes."

The Peony's medicinal uses seem equally overblown. The only effect that research has been able to identify is a tendency to boost muscular tension in animal tests. No painkilling action has been documented.

Avoid If...

No known medical conditions preclude the use of Peony.

SPECIAL CAUTIONS: SIDE EFFECTS BECOME MORE LIKELY AS THE DOSAGE IS INCREASED. THEY INCLUDE SUCH STOMACH COMPLAINTS AS VOMITING, CRAMPS, AND DIARRHEA.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

Given the plant's history as an abortive agent, it would seem wise to avoid it during pregnancy.

How to Prepare

Peony root is produced as an alcohol solution (tincture). The dried flowers can be prepared as a tea, using 1 gram per cup.

Typical Dosage

The average daily dose of Peony flower is 1 gram (1 cup of tea).

Overdosage

Symptoms such as vomiting, cramps, and diarrhea could well be a sign of overdose. If you suspect an overdose, seek medical attention immediately.

PEPITAS

Name: Pumpkin Seeds.

See Also: Pumpkin.

Other Names: Pepitas.

Description

The best part of a pumpkin is something most throw away in the garbage after carving a pumpkin to make a Jack 'O' Lantern; it is the pumpkin seed. Pumpkin seeds packs therapeutic and nutritional ingredients and is used as a herb throughout the world. Look for full, dry seeds with a yellowish-white husk.

Nutrient Content of 1 Ounce (28 grams) Roasted Pepitas (Pumpkin Seeds)(Unsalted)

—Calories 126
—Protein 5 g
—Saturated Fat 5 g
—Cholesterol 0 mg
—Carbohydrate 15 g
—Calcium 16 mg
—Phosphorus 26 mg
—Iron 0.9 mg
—Sodium 5 mg
—Potassium 260 mg
—Dietary fiber 10 g
—Vitamin A 2 RE
—Thiamin 0.01 mg
—Riboflavin 0.02 mg
—Niacin 0.1 mg
—Vitamin C 0 mg
—Therapeutic Value

The pumpkin seeds are a balanced source of good proteins. They are very nourishing and energizing. In addition to protein, they are an excellent source of iron, B vitamins, vitamin E, fiber, oil, and minerals.

Pumpkin seeds are high in zinc, a mineral that aids the healing process and is useful in treating an enlarged prostate gland. Other nutrients are magnesium, phosphorus, zinc, copper, potassium, niacin, folic acid, riboflavin and thiamin. They also contain pantothenic acid, unsaturated oils and antioxidants.

Seeds roasted in oil generally contain saturated acids, making them even more energizing than plain-roasted seeds. Pumpkin seeds are said to be diuretic and to help in the treatment of urinary tract infections and prostate disorders. They also have a reputation for being an aphrodisiac.

Healing Qualities of Pumpkin Seeds and Husks

The medicinal use of pumpkin seeds was adopted by Oriental healers sometime in the seventeenth century.

Sweet, Neutral Energy Treats Large Intestine and Stomach Organ Systems Category: Herb that Expels Parasites.

This delicious, nutritious, nutty-flavored seed has diuretic properties; it soothes irritated tissues, eliminates pain, and expels parasites. It is effective against tapeworms and roundworms. Pumpkin seeds and husks aid milk production in lactating mothers and are used to reduce postpartum swelling of the hands and feet.

Herbal Combinations Using Pumpkin Seeds and Husks

Pumpkin seeds and husks are often used in conjunction with Semen Arecae Catechu to dislodge and expel tapeworms. Usually, for a 150-pound adult, 2 to 4 ounces of powdered pumpkin seeds and husks are taken with water. Two hours later, a tea made with 2 to 4 ounces of Semen Arecae is ingested, followed 30 minutes later by 1/2 ounce of Mirabilitum (a purgative substance, also known as glauber's salt).

Another popular remedy is to mix pumpkin seeds, onions with a little soy milk for parasitic worms in the digestive tract. To make this remedy, liquefy three tablespoons of pumpkin seeds that have been soaked three hours, one-half of a small onion, one-half cup soy milk, and one teaspoon honey. Take this three times daily, three days in a row.

Medicinal Uses of Pumpkin Seeds Throughout the World

People from around the world have discovered the usefulness of pumpkin for medicinal uses. Let us take a short safari.

When the first explorers arrived in America, they noticed the pumpkin plant in the cultivated maize fields of the Indians. The native Indians utilized the plant for medicine as well as for food. An emulsion made from a mixture of pumpkin and watermelon seeds served to heal wounds for members of the Yuma tribe.

The Catawbas ate the fresh or dried seeds as a kidney medicine, while the Menominces drank a mixture of water and powdered squash and pumpkin seeds to ease the passage of urine. In settler folk medicine the ground stems of pumpkin were brewed into a tea to treat "female ills," and the ripe seeds were made into a palatable preparation to dispel worms. Modern folk healers advocate pumpkin seeds to rid the body of intestinal worms, and they point out that the seed oil is helpful for healing bums and wounds.

People of Germany discovered that raw, hulled pumpkin seeds contain substances that stimulate sex hormone production. The seeds contain large amounts of zinc, magnesium, iron, phosphorus, calcium, vitamin A, and vitamin B.

So, eating a handful of pumpkin seeds a day may help prevent impotence. Bulgarian mountain dwellers, Hungarian Gypsies, Anatolian Turks, Ukrainians, and Transylvanians all eat pumpkin seeds as part of their everyday diets. Originally intended to prevent prostate ailments (probably due to the high zinc content), pumpkin seeds have been found by these people to prevent impotence as well.

Studies performed at Vienna University have revealed that prostatic hypertrophy, or swelling of the prostate, is almost non-existent among the men of Transylvania. Extensive research by the Szekler group in the Transylvanian Alps has shown that this phenomenon can be attributed to the Transylvanian passion for pumpkin seeds. Pumpkin seeds contain large amounts of magnesium, which French physicians have proven to be effective in the treatment of prostate ailments.

The seeds are also excellent sources of zinc. The pumpkin is a symbol of prosperity and fruitfulness in China, even though the first pumpkins came from India. In both countries, a popular snack is made by drying pumpkin seeds and dipping them in salt. This snack has gained popularity in other parts of the world, including the United States. The seeds are highly nutritious, containing zinc and other minerals that improve vision.

Ethiopians chew pumpkin seeds (which contain fiber) as a natural laxative. Polish researchers have discovered that the seeds and pulp of deep orange pumpkins and winter squash contain substances that may inhibit cancer. All orange and deep yellow fruits and vegetables contain beta carotene, an effective cancer preventive.

Pumpkin Seed as A Treatment for Acne

The mineral zinc is just as important as vitamin A for your skin. Zinc allows stored vitamin A in the liver to be released into the bloodstream.

To treat acne, you can either take a zinc supplement of 25 to 50 milligrams each day, or eat pumpkin seeds, which are rich in this mineral.

How to Store Pumpkin Seeds

Store pumpkin and winter squash seeds in a cool dry place, away from insects and rodents. You can also freeze them. Chopped or ground seeds should be stored in the refrigerator to prevent them from going rancid.

Preparing

To Roast the Seeds

—Gently remove all the seeds, along with the surrounding filaments, from the cavity of the squash; discard the filaments and pat the seeds dry with a paper towel. Do not rinse them.

—Spread the seeds on a cookie sheet and leave them out to dry at room temperature for several days if possible; otherwise, leave them out at least overnight.

—Place the seeds in the oven and roast them at 350 of until they are golden, shaking them occasionally. Coat them with a little oil and salt if desired.

—Remove the seeds from the oven and take them off the cookie sheet to end roasting.

—To prevent the formation of mold during storage, ensure that the seeds are cool and dry before placing them in an airtight container.

Safety

Do not exceed recommended dosage; taken in excess this herb might produce adverse effects on liver function.

PERILIA LEAF

Name: Perilia leaf.

Biological Name: Folium petillae frutescentis Labiatae.

Other Names: Perilia leaf, Zi Su Ye.

Parts Used: Leaf.

Remedies For

Diaphoretic, carminative, antiemetic Relieves wind cold, promotes sweating, circulates qi, relieves gastric congestion. It can be used for the common cold, cough, chest congestion, bloated stomach and abdomen, nausea, and vomiting. It is also used in cooking and as treatment to relieve symptoms related to seafood poisoning.

Dosage

3–9 grams.

Safety

Perilla leaf should not be used by those who have external diseases where there is already sweating or by those who have a damp-heat condition. No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

PERILLA SEED

Name: Perilla seed.

Biological Name: Perillae frutescentis Labiatae.

Other Names: Perilla seed, zi su zi.

Parts Used: Seed.

Remedies For

Antitussive, expectorant, emollient, antiasthmatic, mild laxative, Perilia seed is used for cold phlegm conditions associated with copious phlegm and wheezing.

It is most useful when there is a stuffy feeling in the chest causing a more labored exhalation rather than inhalation. Perilla seed is also useful when there is constipation due to dryness in the intestines.

Dosage

3–9 Grams.

Safety

Perilla seed should not be used when there is diarrhea or cough due to weakness and deficiency.

PETASITE

Latin Name: Petasites hybridus.

Other Names: Blatterdock, Bog Rhubarb, Butterbur, Flapperdock, Langwort, Umbrella Leaves.

A Remedy For

Kidney and bladder stones. The leaves and roots of the Petasite plant are both considered medicinal, but the root alone has been judged unquestionably effective. It is recommended only for the treatment of urinary stones; but it is also taken for breathing problems—such as coughs, whooping cough, and asthma—as an appetite stimulant, as a remedy for stomach and intestinal cramps, and as a cure for migraine and tension headaches.

Petasite leaf, though unproven, is used in folk medicine for treating breathing problems and diseases of the liver, gallbladder, and pancreas. It is also used as a calming drug to prevent restlessness and promote sleep. Petasite leaf compresses are sometimes applied as an external remedy for wounds and malignant ulcers.

What It Is; Why It Works

Petasite works by stopping spasms in internal organs. However, the unprocessed plant also contains cancer-causing compounds that preclude its use. As a result, you should take only purified commercial preparations (see "Avoid If . . ." below).

Petasite's huge leaves—the largest of any wild plant—earned it its name. They reminded the Ancient Greeks of a "petasos," the type of hat worn by Greek shepherds and the Greek god Hermes. The plant grows throughout northern Asia, Europe, and some areas of North America.

Avoid If...

Natural Petasite contains toxic compounds called pyrrolizidine alkaloids that cause liver damage, genetic damage, cancer, and birth defects.

Even very small traces of the alkaloids are dangerous, so unprocessed Petasite should be carefully avoided.

Alkaloid-free varieties of Petasite, cultivated under laboratory conditions, permit preparation of commercial Petasite extracts that contain virtually no pyrrolizidine. Nevertheless, always check the label for pyrrolizidine content before using a Petasite product.

Special Cautions

Use only products with minimal pyrrolizidine content.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

Because of the danger of birth defects and harm to newborns, avoid all Petasite preparations during pregnancy and while nursing.

How to Prepare

Take only purified commercial preparations.

Typical Dosage

Follow the manufacturer's directions. The daily dose should not contain more than 1 milligram of pyrrolizidine alkaloids.

PHYLLANTHUS

Latin Name: Phyllanthus niruri.

Other Name: Bahupatra.

A Remedy For

—Hepatitis B.

In traditional Indian medicine, Phyllanthus has been used for diabetes, gonorrhea, frequent menstruation, skin ailments, and liver disorders generally without scientifically verified effect. For one type of liver disease, however, Phyllanthus shows genuine promise. It appears to combat the virus that causes hepatitis B.

What It Is; Why It Works

Phyllanthus niruri is the most effective of a group of closely related species that grow in India, China, and tropical locations ranging from the Philippines to Cuba.

Scientists have not identified the ingredient responsible for its medicinal effect, but the herb has been shown to block an enzyme that plays a crucial role in reproduction of the hepatitis B virus.

As a result, a majority of patients show an improvement in blood tests after a month of treatment.

Avoid If...

No known medical conditions preclude the use of Phyllanthus.

SPECIAL CAUTIONS: TO BE EFFECTIVE, THE HERB MUST BE TAKEN REGULARLY FOR A MONTH OR LONGER. AT CUSTOMARY DOSAGE LEVELS, NO SIDE EFFECTS HAVE BEEN REPORTED.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Phyllanthus is usually taken in powdered form.

Typical Dosage

In clinical trials, doses have ranged from 900 to 2,700 milligrams per day.

PHYTOLACCA

Name: Phytolacca.

Biological Name: Phytolacca esculenta, Phytolacca acinosa Phytolaccaceae.

Other Names: Phytolacca, poke root, Shang lu.

Parts Used: Root.

Remedies For

Antibiotic, emetic, diuretic, antitussive, expectorant. It is used to treat lymphatic congestion, swollen lymph glands, edema, mastitis, abnormal congestion of all glands of the body, and severe ascites of the abdomen.

The fresh herb is very strong and irritating to the gastrointestinal tract. Externally, it can be applied as a poultice to inflamed sores and infections. Resolves lumps and tumors, is anticarcinogenic.

Dosage

3–9 grams.

Safety

Phytolacca should be reserved for those with severe excess conditions and should not be used by pregnant women.

POTENTILLA

Latin Name: Potentilla anserina.

Other Names: Cinquefoil, Crampweed, Goose Tansy, Goosegrass, Moor Grass, Silverweed, Trailing Tansy, Wild Agrimony.

A Remedy For

—Diarrhea
—Premenstrual syndrome (PMS)
—Sore throat

In the past, Potentilla was considered a treatment for lockjaw, jaundice (liver disease) and menstrual cramps, and was used to remove freckles and prevent scarring from smallpox.

Today, it is included in various tea mixtures for treating sexual disorders, nervous agitation, and nausea. Its effectiveness for such uses remains unproven.

What It Is; Why It Works

Potentilla's name is derived from the Latin word "potens," meaning powerful. Found in temperate and colder regions of the northern hemisphere, Potentilla has an almond-like fragrance and a dry taste. It has a tightening, astringent effect.

Avoid If...

There are no known medical conditions that preclude the use of Potentilla.

Special Cautions

Use Potentilla cautiously if you have stomach problems; it could make them worse.

Possible Drug Interactions

No interactions have been recorded.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Finely cut Potentilla can be made into a tea by steeping 2 grams (about 3 teaspoonfuls) in boiling water for 10 minutes, then straining.

Typical Dosage

Potentilla is taken orally. The usual daily dosage is 4 to 6 grams (about 6 to 9 teaspoonfuls) of the herb. Potentilla is available in crushed, powdered, and liquid herbal preparations. Strengths of commercial products may vary. Follow the manufacturer's labelling whenever available.

Overdosage

No information on overdosage is available.

PINE OIL

Latin Name: Pinus species.

Other Names: Dwarf Pine, Scotch Pine, Stockholm Tar, Swiss Mountain Pine.

A Remedy For

—Bronchitis

—Colds

—Cough

—Fever

—Nerve pain

—Rheumatism

—Sore throat

—Tendency to infection

In homeopathy, Pine Oil is considered a treatment for bronchial conditions and rheumatism.

What It Is; Why It Works

Pine Oil is extracted from several species of pine in Europe and the Near East, particularly Pinus sylvestris. Young Pine Shoots are also used occasionally, chopped up and steeped as a tea. Oil made from turpentine from Pinus species can be used as a skin rub or dropped into hot water to create vapors for inhalation. Pine Oil tends to reduce bronchial secretions and stimulate local circulation. It is mildly antiseptic.

Avoid If...

Do not use Pine Oil if you have bronchial asthma, whooping cough, or severe inflammation of the breathing passages. Do not use it as a bath additive if you have a large skin injury, acute skin disease, an infectious disease, heart problems, or abnormally tense muscles.

Special Cautions

Pine Oil can irritate the skin and mucous membranes, and has been known to cause breathing problems. Excessive use on large areas of the body can lead to poisoning, with damage to the kidneys or brain. Kidney damage is also a possibility when the oil is taken internally.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Pine Oil is extracted by steam distillation from fresh pine needles, branch tips, and shoots. It is used in ointments and bath salts. Oil extracted from turpentine is also available. Make sure you use only the refined medicinal oil—not raw turpentine.

Typical Dosage

Pine Oil: The oral dosage is 5 grams (about 1 teaspoonful) daily. For inhalation, add several drops to hot water and inhale the vapor. As a bath additive, use 0.025 gram per liter of water. For external use, rub several drops onto the affected area.

Pine Shoots: The oral dose is 9 grams daily in tea, syrup, or an alcohol solution. As a bath additive, use about half a cup of alcoholic extract (tincture).

Medicinal Turpentine Oil: For inhalation, add several drops to hot water and inhale the vapor. For external use, rub several drops onto the affected area. Store in tightly sealed containers away from light.

Overdosage

A dose of 50 grams (less than a quarter of a cup) can be fatal in adults. Symptoms of overdose include nausea, vomiting, reddening of the face, salivation, sore throat, thirst, diarrhea, intestinal spasms, shortness of breath, dizziness, staggering, twitching, urination difficulties, and rash.

Excessive skin contact or inhalation can result in overdose, and deaths have been reported, particularly among children. If you suspect an overdose, seek medical attention immediately.

PRICKLY ASH

Name: Toothache Tree.

Biological Name: Zanthoxylum alatum, Zanthoxylum americanum Rutaceae.

Other Names: Tumbru, Toothache Tree, Tejbal, Prickly Ash Yellow wood, Suterberry.

Description: This shrub is found in North America, India, and Bhutan.

Parts Used: Bark, carpels, carpels of fruits, seeds.

Active Compounds

—Bark

—Alkaloids: g-fagarine, b-fagarine (-skimmianine), magnoflorine, laurifoline, nitidine, chelerythrine, tambetarine and candicine

—Coumarins: xanthyletin, zanthoxyletin, alloxanthyletin.

—Resin, tannin, volatile oil.

MEDICINAL APPLICATIONS

Action

- —Branches, fruit and thorns: carminative, stomachic
- —Bark and Berries: alterative, anti-rheumatic, carminative, diaphoretic, hepatic, stimulant, tonic

Uses

- —asthma
- —bronchitis
- —cholera
- —fever
- —fibrositis
- —indigestion
- —rheumatism
- —skin diseases
- —toothache
- —varicose veins

Prickly Ash is used in many chronic problems such a rheumatism and skin diseases; chilblains, cramp in the leg, varicose veins and varicose ulcers. It is also used for low blood pressure, fever, and inflammation. Externally it may be used as a stimulation liniment for rheumatism and fibrositis. It has a stimulating effect upon the lymphatic system, circulation and mucous membranes.

Dosage

Bark-infusion, decoction.

Infusion: Pour a cup of boiling water onto 1–2 teaspoonfuls of the bark and let infuse for 10–15 minutes. Drink this three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety:

No information about the safety of this herb is available.

Use Caution: Ayurvedic herbs are often taken in combination with others to neutralize the toxicity one herb with the opposing effect of other. Do not take except under the supervision of a qualified professional.

PYGEUM

Name: Pygeum.

Biological Name: Pygeum africanum.

Other Names: Pygeum.

Parts Used: Bark.

Active Compounds

Chemical analysis and pharmacological studies indicate that the lipophilic extract of pygeum bark has three categories of active constituents.

The phytosterols, including beta-sitosterol, have anti-inflammatory effects by interfering with the formation of pro-inflammatory prostaglandins that tend to accumulate in the prostate of men with benign prostatic hyperplasia (BPH). The pentacyclic terpenes have an anti-edema or decongesting effect. The last group are the ferulic esters. These constituents reduce levels of the hormone prolactin and also block cholesterol in the prostate. Prolactin increases uptake of testosterone in the prostate, and cholesterol increases binding sites for testosterone and its more active form dihydrotestosterone.

History

The powdered bark was used as a tea for relief of urinary disorders. European scientists began laboratory investigations into the active constituents in the bark. This led to the development of the modern lipophilic (fat soluble) extract used today.

Remedies For

Useful for

—benign prostatic hyperplasia

Description

Pygeum is an evergreen tree found in the higher elevations of central and southern Africa. The bark is used.

Dosage

The accepted form of pygeum used in Europe for treatment of BPH is a lipophilic extract standardized to 13% total sterols (typically calculated as beta-sitosterol). The recommended dose is 50-100 mg two times per day. Pygeum should be monitored over at least a six- to nine-month period to determine efficacy. As is the case with all BPH treatments, close medical supervision is of the utmost importance.

Safety

Side effects to the lipophilic extract of pygeum are rare. In clinical studies, there were very rare reports of mild gastrointestinal irritation in some patients. No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

R

RADISH

Latin Name: Raphanus sativus.

A Remedy For

—Appetite loss

—Bronchitis

—Colds

—Cough

—Fever

—Sore throat

—Tendency to infection

The juice of this common vegetable is used primarily for digestive disorders and upper respiratory inflammation. In Asian medicine, it's also taken for headache, liver disease, and pain, but its effectiveness for these problems has not been scientifically confirmed.

What It Is; Why It Works

The thick, tangy root is the medicinal part of the plant. It promotes digestive secretions, stimulates the bowels, and helps kill germs.

Unknown in the wild, the Radish was probably domesticated in the Far East. It was already under cultivation when the pharaohs reigned in Egypt.

Avoid If...

Do not take large doses of Radish if you have gallstones; it could cause painful spasms in the biliary tract.

SPECIAL CAUTIONS: HIGH DOSES OF RADISH CAN IRRITATE THE DIGESTIVE TRACT.

Possible Drug Interactions

No drug interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Radish can be grated or pressed to produce juice. For whooping cough, grated radish can be combined with honey. Grate one radish, mix with honey, and allow the mixture to stand for 10 hours.

Typical Dosage

Radish is taken orally.

Radish Juice: One-half tablespoonful of pressed juice several times a day, up to a maximum of 4 to 6 tablespoonfuls daily.

Radish/honey mixture: For whooping cough, take spoonfuls throughout the day.

Overdosage

No information on overdosage is available.

RAUWOLFIA

Latin Name: Rauwolfia serpentina.

A Remedy For

—Insomnia

—Nervousness

Rauwolfia is also used as a remedy for anxiety, abnormal muscle tension, and twitching, In folk medicine, It has been used for fever, diarrhea, general weakness, constipation, intestinal diseases, liver problems, rheumatism, water retention, and mental disorders. However, its effectiveness for such conditions remains unverified.

Asian medicine uses it for giddiness, high blood pressure, slow and painful urination, and wounds. In India, extracts of the plant are used as antidotes for poisonous snake bites.

What It Is; Why It Works

Reserpine, an extract of Rauwolfia, combats high blood pressure, and is found in such prescription blood pressure medications as Diupres and Hydropres. Reserpine also combats irregular heartbeat and has a sedative effect.

Rauwolfia, a small shrub sporting white to pink flowers, is native to India, Indochina, Borneo, Sri Lanka, and Sumatra. Its medicinal properties lie in the dried root. The fresh root has a very bitter and unpleasant taste.

Avoid If...

Rauwolfia can trigger severe depression. Do not take it when depressed.

The drug also tends to stimulate the lining of the digestive tract, so you should avoid it if you have an ulcer or ulcerative colitis.

Avoid Rauwolfia, too, if you are pregnant or nursing, or are taking a drug classified as a monoamine oxidase inhibitor, such as the antidepressants Nardil and Parnate.

SPECIAL CAUTIONS: SIDE EFFECTS CAN INCLUDE NASAL CONGESTION, DEPRESSION, FATIGUE, IMPOTENCE, AND SLOWED REACTION TIME. USE CAUTION WHEN HANDLING MACHINERY OR DRIVING.

Possible Drug Interactions

Never combine Rauwolfia with a monoamine oxidase inhibitor such as Nardil or Parnate.

Rauwolfia enhances the sedative effect of alcohol and barbiturates; avoid the combination.

Taken with digitalis-based drugs such as Lanoxin, or quinidine products such as Quinaglute and Quinidex, Rauwolfia can slow the heart and cause irregular beats.

The drug is also likely to interact with levodopa (Sinemet), causing twitching and other involuntary movements. Combining it with many common flu remedies and appetite suppressants can lead to a sharp rise in blood pressure.

Special Information if you are Pregnant or Breastfeeding

Rauwolfia may cause birth defects when taken during pregnancy; and it appears in breast milk. Avoid this drug while pregnant or breastfeeding.

How to Prepare

Rauwolfia is available in ground form and as a powder for internal use.

Typical Dosage

The usual daily dose of Rauwolfia is 600 milligrams. (Recommended dosage of the active ingredient reserpine is far smaller; 0.25 milligram is the daily maximum.)

Overdosage

Symptoms of overdosage include mental depression, heavy sedation, and a severe drop in blood pressure. If you suspect an overdose, seek medical attention immediately.

RED ELM

Name: Slippery Elm.

Biological Name: Ulmus fulva Ulmaceae.

Other Names: Slippery Elm, Red Elm.

Parts Used: Inner bark.

Active Compounds

Mucilage, composed of galactose, 3-methyl galactose, rhamnose and galacturonic acid residues.

Remedies For

Demulcent, emollient, nutrient, astringent, anti-inflammatory. Slippery Elm Bark is a soothing nutritive demulcent which is perfectly suited for sensitive or inflamed mucous membrane linings in the digestive system. This herb is used in the treatment of gastritis, gastric or duodenal ulcer, enteritis, colitis and the like. It is often used as a food during convalescence as it is gentle and easily assimilated. In diarrhea it will soothe and astringe at the same time. Externally it makes an excellent poultice for use in cases of boils, abscesses or ulcers.

Dosage

Decoction: Use 1 part of the powdered bark to 8 parts of water. Mix the powder in a little water initially to ensure it will mix. Bring to the boil and simmer gently for 10–15 minutes, Drink half a cup three times a day.

Poultice: Mix the coarse powdered bark with enough boiling water to make a paste.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

RUPTUREWORT

Latin Name: Herniaria glabra.

Other Names: Flax Weed, Herniary.

A Remedy For

Used in the past for hernias and kidney stones, today Rupturewort is taken primarily for urinary tract infections. It has also been used for respiratory disorders, nerve inflammation, gout, and rheumatism. For none of these problems, however, does it show any proven effectiveness.

What It Is; Why It Works

Belief in Rupturewort's efficacy is centuries old. A treatise written in 1597 recommends the herb for hernias and observes that "the powder thereof, taken with wine ... wasteth away the stones in the kidney and expelleth them." The herb is still thought to increase urination and relieve spasms, but scientists have yet to verify these effects.

A tiny shrub—only 6 inches high—Rupturewort is found in the temperate and southern regions of Europe and Russia. It produces small yellow-white flowers that grow in clusters of 7 to 10. Only the above-ground parts of the plant are considered medicinal.

Avoid If...

No known medical conditions preclude the use of Rupturewort.

SPECIAL CAUTIONS: AT CUSTOMARY DOSAGE LEVELS, RUPTUREWORT POSES NO RISKS.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Produced in crushed and extract form, Rupturewort is usually taken as tea. To prepare the tea, combine 1.5 grams (about 1 teaspoonful) of crushed Rupturewort with cold water, bring briefly to a boil, steep for 5 minutes, and strain.

Typical Dosage

As a flushing-out therapy for urinary infections, take 1 cup of tea 2 to 3 times daily.

S

SAFETA MUSALI

Name: White Musali.

Biological Name: Asparagus adscendens.

Other Names: White Musali, Shweta Musali, Safeta Musali.

Description

This herb is found in India. It is related to satavari, another ayurvedic herb.

Parts Used: Tuberous root or rhizome.

MEDICINAL APPLICATIONS

Actions

Demulcent, galactagogue, nutritive tonic.

Uses

—diarrhea
—general debility
—leukorrhea
—sexual debility
—spermatorrhea
—wasting diseases

This herb used during pregnancy and postpartum. It helps to nourish the fetus. It also helps to increase the breast milk flow.

Dosage

Milk decoction, powder, confection.

Safety

May cause congestion. No other information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

SALEP ORCHID

Name: Salep Orchid.

Biological Name: Orchis mascula, Allium Macleani, Orchis latifolia, Orchis laxiflora

Other Names: Salep Orchid, Salam-mishri, Salabmishri.

Parts Used: Root.

MEDICINAL APPLICATIONS

Actions

Restorative, invigorative, tonic.

Uses

—diabetes
—diarrhea
—dysentery
—hemiplegia
—paralysis

—general weakness

—impotence

—nervous or sexual debility

—wasting diseases

Description

This herb is found in Iran and Afghanistan.

Dosage

One teaspoon of powdered root to one cup of boiled milk.

Safety

Avoid chilies, acids, very spicy foods, intoxicants, staying awake through the night, and sexual acts, when taking this herb.

No other information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

SANG YE

Name: White mulberry leaf.

Biological Name: Mori albae Moraceae.

Other Names: White mulberry leaf, Sang ye.

Parts Used: Leaves.

Remedies For

Diaphoretic, antibacterial, antihypertensive.

Clears wind heat, soothes the liver, clears the eyes. Can be used for lung congestion with cough, sore throat, and yellow sputum. It brightens the eyes when they are red, painful, or dry and aching eyes. It can also be used when there is bleeding with heat signs.

Dosage

5–12 grams.

Safety

White mulberry leaf should not be used by those who have weakness with cold in the lungs.

SANKH PUSHPI

Name: Sankh Pushpi.

Biological Name: Canscora decussata Gentianaceae.

Other Names: Sankh Pushpi, Shankhini Kambumalini, Samkhapushpi, Sankaphuli.

Description

This herb is found in India and Burma.

Parts Used: Entire plant and juice.

MEDICINAL APPLICATIONS

Action

Alterative, nervine.

Uses

—epilepsy

—insanity

—nervous debility

—scrofula

This herb is believe to be a nervine and alternative tonic capable of including changes in the brain, giving a high degree of memory retention capability. A compound herbal made from this herb is claimed to stimulate memory retention.

Dosage

Juice, infusion, decoction, powder, paste.

Safety

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

SAVIN TOPS

Latin Name: Juniperus sabina.

A Remedy For

—Warts

Although not officially recognized as effective, this herb appears to be a valid treatment for warts.

What It Is; Why It Works

The young shoots and leaves of Juniperus sabina contain oils that attack the viruses responsible for warts. The oils are extremely toxic and, used carelessly, can prove highly irritating to surrounding skin.

Taken internally, the herb causes an abnormal surge of blood in the lower abdominal organs, an effect which is sometimes employed to stimulate abortion.

However, the drug is so poisonous that the mother's life is often in as much jeopardy as the baby's, and numerous fatalities have occurred.

Juniperus sabina is a 14 foot evergreen shrub with blue-green needle-like leaves. It is found in southern and central Europe, southern Russia, and the northern United States.

Avoid If...

For external use only. Internal administration can lead to fatal poisoning.

SPECIAL CAUTIONS: BE CAREFUL TO LIMIT APPLICATION TO THE WART ALONE. CONTACT WITH THE SURROUNDING SKIN CAN CAUSE TISSUE DEATH AND BLISTERING. IF THE DRUG IS ABSORBED THROUGH THE SKIN, IT CAN LEAD TO INTERNAL POISONING. BE AWARE THAT THIS HERB BECOMES MORE DANGEROUS WITH AGE. THE LONGER THE DRUG IS STORED, THE MORE POISONOUS IT BECOMES.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

Given the herb's use in abortion, it's wise to avoid even external application during pregnancy.

How to Prepare

The herb is applied in powder form.

Typical Dosage

Apply twice daily.

Overdosage

A mere 6 drops of the oils from this herb are enough to prove life-threatening. Early symptoms of poisoning include queasiness, irregular heartbeat, spasms, kidney damage, and bloody urine. These symptoms are followed by paralysis, coma, and, ultimately, death. If you suspect poisoning, seek emergency treatment immediately.

SCHISANDRA

Name: Schisandra.

Biological Name: Schisandra chinensis.

Other Names: Schisandra, Wu-wei-zi.

Parts Used: Fruit.

Active Compounds

Schisandra contains a number of compounds, including essential oils, numerous acids, and lignans. Lignans (schizandrin, deoxyschizandrin, gomisins, and pregomisin) are found in the seeds of the fruit and have a number of medicinal actions.

History

The classical treatise on Chinese herbal medicine, the Shen Nung Pen Tsao Ching, described schisandra as a high-grade herbal drug useful for a wide variety of medical conditions—especially as a kidney tonic and lung astringent. Chinese herbalists use schisandra for coughs, night sweats, insomnia, thirst, and physical exhaustion.

Remedies For

Useful for the tyreatment of

—chemotherapy support

—common cold/sore throat

—fatigue

—hepatitis

—liver support

—stress

Modern Chinese research suggests that lignans in schisandra regenerate liver tissue damaged by harmful influences such as viral hepatitis and alcohol. Lignans lower blood levels of serum glutamic pyruvic transaminase (SGPT), a marker for infective hepatitis and other liver disorders. Schisandra fruit may also have an adaptogenic action, much like the herb ginseng, but with weaker effects. Laboratory work suggests that schisandra may improve work performance, build strength, and help to reduce fatigue.

Description

Schisandra is a woody vine with numerous clusters of tiny, bright red berries. It is found throughout northern and northeast China and the adjacent regions of Russia and Korea.

The fully ripe, sun-dried fruit is used medicinally. It has sour, sweet, salty, hot, and bitter tastes. This unusual combination of flavors is reflected in schisandra's Chinese name wu-wei-zi, meaning "five taste fruit."

Dosage

Schisandra Fruit: 1–6 grams per day.

Tincture: 2–4 ml three times per day.

Safety

Side effects involving schisandra are uncommon but may include abdominal upset, decreased appetite, and skin rash.

Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

SCOPOLA

Latin Name: Scopolia Carniolica.

Other Names: Belladonna Scopola, Japanese Belladonna.

A Remedy For

—Liver and gallbladder problems.

Scopola is used to relieve spasms in the digestive system, the bile ducts (which carry bile from the liver to the intestine), and the urinary tract.

What It Is; Why It Works

Similar to Belladonna and Henbane in its action, Scopola blocks nerve impulses in the muscular walls of the digestive and urinary tracts, thus relaxing them and ending any spasms. It also relieves muscular tremors and rigidity, improves conduction of electrical impulses in the heart, and speeds up the heart rate. Its main active ingredient, hyoscyamine, is found in such prescription drugs as Cytospaz, Donnatal, Levsin, and Urised.

A perennial plant from 1 to 2 feet in height, Scopola's color ranges from yellowish brown to dark brownish gray. It is native to Southeast Europe and Southwest Russia. The medicinal part is the underground stem.

Avoid If...

Do not take Scopola if you suffer from rapid heartbeat, any narrowing or constriction in the digestive tract, or an enlarged colon. Check with your doctor before using this herb if you have glaucoma (high pressure in the eye) or a prostate tumor; in certain cases it must be avoided. Not for children under 6.

SPECIAL CAUTIONS: TAKE ONLY AT THE RECOMMENDED DOSAGES. HIGH DOSES WILL CAUSE UNPLEASANT SIDE EFFECTS (SEE "OVERDOSAGE" BELOW).

Possible Drug Interactions

Scopola heightens the effect of certain medications. Check with your doctor before combining it with the following:

—Amantadine (Symmetrel)

—Quinidine (Quinaglute, Quinidex)

—Tricyclic antidepressant medications such as Elavil, Pamelor, and Tofranil

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Scopola is available as crushed root, powder, and other preparations.

Typical Dosage

The usual daily dosage is 0.25 milligrams of total active ingredient. Take no more than 1 milligram at a time. The maximum daily dosage is 3 milligrams. Strengths of commercial preparations may vary. Follow the manufacturer's labeling whenever available.

Overdosage

The four early warning signs of an overdose are skin reddening, dry mouth, rapid heartbeat, and dilated pupils. Other problems that may develop include difficulty focusing, decreased perspiration and increased body heat, urination problems, and severe constipation.

Very high doses can cause restlessness, compulsive speech, hallucinations, delirium, and manic episodes followed by exhaustion and sleep. Doses above 100 milligrams of active ingredient for adults and 20 to 50 milligrams for children can cause asphyxiation. If you suspect an overdose, seek medical attention immediately.

SENEGA SNAKE ROOT

Name: Snake Root.

Biological Name: Polygala senega Aristolochiaceae.

Other Names: Snake Root, Senega Snake Root.

Parts Used: Rhizome.

Active Compounds

—Triterpenoid saponins based on the aglyucones presenegenin, senegenin, hydroxysenegin, polygalacic acid and senegenic acid.

—Phenolic acids; p-coumaric, ferulic, sinapic, p-methoxycinnamic

—Polygalitol, a sorbitol derivative

—Miscellane ous; methyl salicylate, sterols, fats

Remedies For

Expectorant, diaphoretic, sialogogue, emetic.

Snake Root is used by Seneca Indians for a range of problems including snake bites. It has excellent expectorant effects which may be utilized in the treatment of bronchitic asthma, especially where there is some difficulty with expectoration.

It has a general power of stimulating secretion, including saliva. Used as a mouthwash and gargle in the treatment of pharyngitis and laryngitis.

Caution: Excessive use will irritate the lining of the gut and cause vomiting.

Dosage

Infusion: Pour a cup of boiling water onto 1/2 teaspoonful of the dried root and leave to infuse for 5–10 minutes. Drink one cup three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

CAUTION: EXCESSIVE USE WILL IRRITATE THE LINING OF THE GUT AND CAUSE VOMITING.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

SELENICEREUS GRANDIFLORUS

Latin Name: Selenicereus grandiflorus.

Other Names: Night-blooming Cereus, Sweet-scented Cactus.

A Remedy For

This herb is sometimes recommended for urinary tract infections and heart conditions such as the crushing pain of angina. Although it exhibits proven effects on the heart, its value as a remedy has not been officially recognized. In folk medicine, Selenicereus Grandiflorus has also been used to treat the spitting up of bloody sputum, heavy or painful menstrual periods, and hemorrhages.

The juice of the plant has been used for bladder infections, shortness of breath, and water retention. Applied externally, it has been used for rheumatism. And in homeopathic medicine, it's recommended for spasmodic pain and hemorrhage.

What It Is; Why It Works

Selenicereus Grandiflorus has digitalis-like effects; it boosts the heart and opens the blood vessels. It also stimulates the movement-governing nerves in the spinal cord, and may have an anti-inflammatory effect on the skin. The plant has a snake-like, creeping or climbing stem that can reach over 30 feet in length. Its huge, sweet-smelling flowers—up to 10 inches in diameter—bloom for only

6 hours before dying. Indigenous to Central America, it is cultivated primarily in Mexico. The flowers and other above-ground parts of the plant are considered medicinal.

Avoid If...

No known medical conditions preclude the use of Selenicereus Grandiflorus.

SPECIAL CAUTIONS: AT CUSTOMARY DOSAGE LEVELS, EXTRACTS OF SELENICEREUS GRANDIFLORUS POSE NO PROBLEMS. HOWEVER, THE FRESH JUICE OF THE PLANT IS SAID TO CAUSE ITCHING AND PUSTULES ON THE SKIN, AND, WHEN TAKEN INTERNALLY, BURNING OF THE MOUTH, QUEASINESS, VOMITING, AND DIARRHEA.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Selenicereus Grandiflorus is available as a liquid extract and an alcohol solution (tincture).

Typical Dosage

Liquid Extract: Up to 0.6 milliliters 1 to 10 times daily.

Tincture: 0.12 to 2 milliliters 2 to 3 times daily.

SESAME

Name: Sesame.

Biological Name: Sesamum indicum, Sesamum orientale, Sesamum trifoliatum, Sesamum luteum Pedaliaceae.

Other Names: Sesame, Tila, Til Ellu, Snehaphala.

Description

This is a small bush found in India. There are three varieties; black, white, red (or brown). White has most oil, black is best for healing.

Parts Used: Seed, oil, leaf.

MEDICINAL APPLICATIONS

Actions

Seeds: Aphrodisiac, demulcent, diuretic, emmenagogue, emollient, galactogogue, laxative, rejuvenative, tonic.

Leaves: Demulcent

Uses

—amenorrhea
—bums
—cholera
—constipation
—cough
—dysentery
—dysmenorrhea
—gonorrhea
—hemorrhoids
—scalds
—ulcers
—wounds

Dosage

Decoction, sweets, paste, poultice, powder, medicated oil.

Safety

No information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE

OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

SHAMROCK

Name: White Clover.

Biological Name: Trifolium repens.

Other Names: White Clover, white shamrock, shamrock.

Parts Used: Blossoms.

Remedies For

Depurative, Detergent: An old fashioned remedy to cleanse the system. Blood purifier, especially in boils, ulcers and other skin diseases. A strong tea of white clover blossoms is very healing to sores when applied externally. Similar to red clover in use.

Combinations: Equal parts of white clover and yellow dock make an excellent salve.

Safety

No information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

STEPHANIA ROOT

Name: Stephania root .

Biological Name: Stephaniae tetrandrae Menispermaceae.

Other Names: Stephania root

Parts Used: Root.

Remedies For

Analgesic, antipyretic, anti-inflammatory, anti-tumor, antibacterial, antihypertensive, Diuretic.

This herb is used for arthritic and rheumatic conditions caused by wind, damp, and coldness; it can also be used for heat, depending on the other herbs with which it is combined with. Also useful for the treatment of generalized edema, ascites, lymphedema, and deficient mother's milk.

Dosage

3–9 grams.

Safety

Stephania should not be used by those with chronic dampness or those with yin deficiency.

STEVIA

Name: Stevia

Biological Name: Stevia rebaudiana.

Other Names: Stevia, Sweetleaf.

Parts Used: Leaf.

Active Compounds

Various glycosides, particularly stevoside, give stevia its sweetness. Stevoside is somewhere between 100 to 200 times sweeter than sugar. Early reports suggested that stevia might have beneficial effects on glucose tolerance (and therefore potentially help with diabetes), although not all reports have confirmed this. Even if stevia did not have direct antidiabetic effects, its use as a sweetener could reduce intake of sugars in such patients. Other studies have shown stevia to dilate blood vessels in animals, which might help with high blood pressure. The doses used were higher than those used for sweetening purposes, and this effect has not been proven in humans.

History

The native peoples in South America used stevia primarily as a sweetener, a practice adopted by European colonists in local regions. The indigenous tribes also used stevia to treat diabetes and to prevent pregnancy. During World War II, stevia was grown in England as a sugar substitute. The greatest use of stevia today can be found in Japan.

Remedies For

Useful for those suffering from diabetes.

Description

The stevia plant originally came from the rain forests of Brazil and Paraguay. It is now grown in those areas, as well as in Japan, Korea, Thailand, and China. It is most widely used as a non-sugar sweetener in food and drink, particularly because it does not appear to have any of the side effects of sugar and is not broken down by heat.

Dosage

Less than 1 gram per day can be used effectively as a sweetener. Usually, the powdered herb is added directly to tea or to food.

Safety

Extensive reviews of human and animal data indicate stevia to be safe. Stevia accounts for nearly 40% of the sweetener market in Japan and is commonly used in various parts of South America. Therefore, it is unlikely that moderate intake of stevia is harmful.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

T

TANGERINE PEEL

Latin Name: Citrus reticulata.

Other Name: Mandarin Orange Peel.

A Remedy For

Chinese herbalists use Tangerine Peel to relieve indigestion, gas, bloating, nausea, vomiting, and loose stools. It is also considered a remedy for pain in the breast and side, and for the pain of hernia. Combined with pinellia root, it's used to loosen phlegm and relieve chest congestion.

What It Is; Why It Works

Tangerine Peel can be found at most Asian markets and many western-style health food stores. Aged red or orange-colored peel is generally considered best, but it's the young, green peel that's used for hernias and pain in the breast or side. The red-colored peel is favored for control of vomiting and belching.

Avoid If...

You should not take Tangerine Peel if you have a dry cough or an excessively red tongue, or if you are spitting up blood.

SPECIAL CAUTIONS: AT CUSTOMARY DOSAGE LEVELS, TANGERINE PEEL APPEARS TO POSE NO RISKS.

Possible Drug Interactions

No interactions have been reported.

Special Information if you are Pregnant or Breastfeeding

No harmful effects are known.

How to Prepare

Available in dried peel form, and in pills.

Typical Dosage

There are no standard guidelines on record.

Overdosage

No information on overdosage is available.

TEA TREE

Name: Ti Tree, Tea Tree.

Biological Name: Melaleuca alternifolia Myrtaceae.

Other Names: Ti Tree, Tea tree, Australian tea tree.

Parts Used: Essential oil, the leaf.

Active Compounds

Essential oil containing a range of terpenes and sesquiterpenes.

History

In 1770, Captain James Cook and his party came upon a grove of trees thick with sticky, aromatic leaves that they later found made a spicy tea. The "Tea Tree", as it was called by Captain Cook, became a valued bush remedy used by the early European settlers.

However, it was not until after the First World War that serious attention was given to the plant's specific medical uses. In 1923 an Australian government scientist discovered that the essential oil from the tea tree is 12 times stronger as an antiseptic bactericide than carbolic acid (the standard). Research continued, and tea tree became recognized, as a powerful disinfectant, non- poisonous and non-irritating.

Indeed, among the essential oils valued for their anti-infectious properties, tea tree has few rivals. Powerfully antibiotic— literally "against life"—the oil is nevertheless supportive to the life of the body and immune system, and may be safely employed for a wide range of bacterial, viral, and fungal infections. The oil also helps prevent the recurrence of infection.

Remedies For

Anti-microbial, analgesic, antibacterial, antifungal, anti-infectious, antiparasitic, antiviral, balsamic, cardiotonic, cicatrisant, immune tonic, neurotonic, phlebotonic, general tonic, vulnerary.

The essential oil of Ti Tree is an important anti-microbial. Many people make exaggerated claims about the effectiveness of this herb; there are very few scientific evidence to its usefulness.

A list of conditions that Melaleuca oil has been suggested for include: sinusitis, the common cold, sinus blockage, laryngitis, coughs, apthous ulcers, boils, cuts, bites, sunburn, miliaria, parasites, head lice, herpes simples, herpes progenitalis, impetigo, psoriasis, infected seborrhoeic dermatitis, ringworm of the scalp, ringworm, athletes foot, fungal infections of the nails, thrush, trichomonal vaginitis.

G. Mojay, author of "Aromatherapy for Healing the Spirit," says thus about the essential oil from Tea tree:

"The oil may be used for infections that include colds, flu, and bronchitis; sinusitis, otitis and pyorrhoea; candidiasis and viral enteritis; and cystitis and vaginal thrush. Like niaouli oil, it may also be used for bacterial and fungal skin infections, such as impetigo and tinea versicolor.

Tea tree oil is renowned not only for its anti-infectious, immuno-stimulant action but for its power to reinforce the Lungs, Heart, and nervous system. Also used for chronic lethargy, shallow breathing, palpitations, and poor circulation. Steadying the nerves and promoting blood-flow to the brain, tea tree oil is also indicated for mental fatigue and nervous debility, especially in people-whose immune system is weak.

It fortifies the Lungs and Bodily Soul through its camphoraceous pungency thus helping to promote both a positive outlook and the healing instinct. At the same time, its strong, bittersweet spiciness invigorates the Heart and Mind (Shen), uplifting the Spirit and building confidence.

Tea tree oil is of special importance, therefore, to physically delicate individuals who struggle not only with their bodies but with the feelings of victimization and doom that can easily accompany—and exacerbate—chronic ill-health."

Description

Tea tree is a small tree, growing to a height of 22 feet, with narrow, soft, alternate leaves and yellowish flowers the shape of bottlebrushes.

One of more than 30 species of "paperbark' trees that flourish in Australia, tea tree belongs to the Melaleuca genus, and is closely related to Melaieuca leucadendron (the source of cajuput oil) and Melaleuca quinquenervia (which produces niaouli oil).

The name Melaleuca comes from the Greek melas (black) and leukos (white)—referring to the contrast between the dark—green foliage, which appears black, and the loose, paper-thin and very white bark.

Melaleuca alternifolia thrives in a relatively small area of New South Wales, in swampy low-lying land surrounding flood-prone river systems. Because tea tree favors rather remote wetlands, harvesting the leaves for their oil is difficult.

Dosage

The oil is for external use and in people with sensitive skin it should be diluted with a bland fixed oil such as almond oil. There is currently a wide range of products on the market that contain the oil. These include toothpaste, soap, shampoo.

THUJA

Name: Western Hemlock.

Biological Name: Thuja occidentalis Cupressaceae.

Other Names: Western Hemlock, Thuja.

Parts Used: Young twigs.

Active Compounds

1% Volatile oil including thujone; flavonoid glycoside; mucilage; tannin.

Remedies For

Expectorant, anti-microbial, diuretic, astringent, alterative.

Thuja's main action is due to its stimulating and alterative volatile oil. In bronchial catarrh Thuja combines expectoration with a systemic stimulation beneficial if there is also heart weakness. Thuja should be avoided where the cough is due to over stimulation, as in dry irritable coughs.

Thuja has a specific reflex action on the uterus and may help in delayed menstruation, but because of this action is should be avoided in pregnancy. Where ordinary incontinence occurs due to loss of muscle tone, Thuja may be used. Also used in the treatment of psoriasis and rheumatism. Externally it may be used to treat warts. A marked anti-fungal effect is found if used externally for ringworm and thrush.

David Hoffman describes the use of this herb thus: "Thuja is given internally for cancer and for the pains of cancer it is applied externally, when possible, occasionally with good results. Thuja certainly exercises a direct influence upon the glandular structures and function. In what manner this influence is exercised is unknown, but in any disease that involves the gland, this remedy must be considered, and if there are no contraindications it can be tried and in many cases as with the ductless glands, it seems to act in a direct manner. Thuja is directly indicated, first, s a peculiar alterative, in improving diathetic conditions of the blood. Again, it acts directly upon abnormal growths—perversions, such as peculiar conditions of the cell structure of the skin and other external structure. It is thus indicated in all abnormal growths of the skin or mucous membranes. It exercises a specific influence upon catarrhal discharges, correcting the glandular faults that are to blame for such a condition wherever they may be. It is specific to urinary irritation in aged people especially; also in childhood. It strengthens the sphincter of the bladder.

As an external application Thuja produces at first a sensation of smarting or tingling when applied to open sores or wounds and it is usually best to dilute it with on, two or four parts of water, or to combine the non-alcoholic extract with an ointment base in the above proportion.

This constitutes an excellent mildly antiseptic and actively stimulating dressing to indolent, phagedenic or gangrenous ulcers. It is of much service in bed sores and in other open ulcers dependent upon local or general nerve exhaustion. In chronic skin diseases of either a non-specific or specific character, it is a useful remedy.

Vegetations of all kinds, especially those upon mucous surfaces, will yield to it readily. It is a useful agent in the treatment of post-nasal catarrh and nasal polypi. A small dose internally 4 or 5 times daily, with the application of fluid hydrastis in a spray, will quickly retard or remove such abnormal growths. It is also applicable to sloughing wounds and to phagedena or the venereal organs. It is a positive remedy in the treatment of senile gangrene. It causes gangrenous surfaces to dry without hemorrhage or other discharge, destroys offensive odors and influences granulation.

The agent is especially advised in the treatment of urinary disorders of the aged and young. It gives satisfaction in the treatment of nocturnal enuresis when the difficulty is of functional origin. It is also valuable when there is dribbling of urine, loss of control from paralysis of the sphincter, perhaps, in the aged, where urinary incontinence is present, with severe coughs, lack of control when coughing or sneezing. Sometimes in severe cases of nocturnal enuresis, it is accompanied with belladonna, or Rhus aromatica with good results. In old men with chronic prostatitis, with constant dribbling of the urine, this agent is valuable. It relieves the weakness at the neck of the bladder. It tones the muscular structure of the bladder and exercises a desirable influence over the mucous structures of the entire urinary apparatus. It also stimulates secretion within the kidney tubules by its direct influence upon the epithelial cells.

The remedy is valuable in the treatment of disorders of the mucous lining of the bronchial tubes. It is beneficial in ulcerative forms of sore throat, where the secretions are fetid in character. It may be inhaled in chronic bronchitis, bronchorrhea; bronchitis, with offensive discharge; chronic nasal catarrh. Hemorrhage from these organs is beneficially influenced by its use. A number of cases of spermatorrhea have been cured since our previous report on this remedy. The balanitis from cystitis with frequent urination, indicates this remedy. It is beneficial when the urine seems to burn or scald in the passing, when there is local soreness in the urethra or neck of the bladder, when the bladder tolerates but little urine at a time and the patient must rise frequently during the night. In cases or verucca on the genitalia or rectum, this agent is advantageously used, especially if preceded by a mild escharotic. In prolapsus of the rectum, especially in cases depending upon paralysis, this agent may be diluted and injected. It has stimulating properties, which restore the vitality of the part. It is good for fissure of the rectum with piles."

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried herb and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

CAUTION: AVOID DURING PREGNANCY.

No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

TOMATO

Biological Name: Lycopersicon esculentum, Lycopersicon lycopersicum.

Family: Nightshade.

Parts Used: Fruit.

Active Ingredients

Along with the potassium, folate, Vitamin A, Vitamin C, Calcium and Iron, tomato also contains lycopine, an antioxidant that protects against some cancers.

Tomatoes are one of the best sources for lycopine. Lycopine is an anti-oxidant that protects the cells in our body from oxidants that have been linked to cancer. Laboratory tests showed that lycopine was twice as powerful as beta-carotene at neutralizing free radicals.

People who eat a large amount of tomatoes and tomato products are found to have a reduced risk for a number of types of cancers including but not limited to prostate, lung and stomach, pancreatic, breast, cervical, colorectal, oral and esophageal cancers.

Brief History

In the United States, more tomatoes are consumed than any other single fruit or vegetable. Tomatoes far outdistance oranges, potatoes, lettuce, peas, carrots, and bananas!

The tomato is native to the Americas. Aztecs and Incas are credited with harvesting the earliest tomatoes as early as 700 A.D. Spanish conquistadors carried it to Europe from Mexico and Central America in the 16th century. Tomatoes quickly found favor in the Mediterranean countries of Spain, Portugal and Italy.

Early tomatoes were very small, about the size of today's cherry tomatoes. Tomato didn't make much inroads into Northern Europe due to fear and ignorance. The French called it "The Apple of Love," the Germans "The Apple of Paradise;" but the British believed it was poisonous.

The Creoles in New Orleans finally brought tomatoes into the kitchen in 1812 with their tomato-enhanced gumbos and jambalayas. The people of Maine quickly followed suit, combining fresh tomatoes with local seafood.

But it would be another half-century before tomato really got an acceptance as an edible food. By 1850, the tomato was an important produce item in every American city.

Today, many varieties of tomatoes are available such as:

—The large, all-purpose beefsteak types

—The oval plum variety, used chiefly for cooking purposes

—The small, tasty cherry tomato, often served in salads

—The large, yellow or orange, low-acid tomatoes

How to Pick Tomato

The very best tomatoes are the succulent, vine-ripened kind simply grown in your own backyard. You can also buy them in season from local farms, outdoor produce stands, or farmer's markets. They will be bursting with flavor and nutritional goodness.

The commercially marketed tomatoes are usually picked green and artificially ripened with ethylene gas. Many food gourmets complain that they are "tasteless, have a mealy texture, and a lower vitamin content than fully grown tomatoes that have ripened on the vine." Smell the tomato. Gassed tomatoes are odorless. Vine-ripened tomatoes, on the other hand, will have the characteristic tomato fragrance.

Healing Benefits of Tomato

—Cancer Benefits

—Good for Coronary Heart Health

—Reduces high blood pressure (Hypertension)

—Prevents Diarrhea

—Soothes Eye Irritation

—Skincare—Makes skin shiny and vibrant

—Heals Sunburn

—Heals Wounds and Sores

—Restores Vitality—For Persistent Fatigue

—Supports Liver Health

Safety

Tomatoes may cause indigestion and heartburn.

Tomatoes may be allergic to some.

Tomatoes belong to nightshade family. Nightshade family contains a toxic substance called solanine. Tomatoes are no exception to this. They may trigger headaches in susceptible people.

Tomatoes are a relatively common cause of allergies. An unidentified substance in tomatoes and tomato- based products can cause acid reflux, leading to indigestion and heartburn. Individuals who often have digestive upsets should try eliminating tomatoes for 2 or 3 weeks to rule out tomatoes as the cause.

Many commercially prepared pickles and other condiments contain tomatoes, including ketchup and chili sauce, pasta sauces, chutneys, and the Latin-American salsa. Many of these are high in sugar, oil and added salt. Watch the ingredients and do not take if you are on sodium restricted diet.

✲V-Z✲

VIDANGA

Name: Vidanga.

Biological Name: Embelia ribes, Embelia Indica, Embelia Glandulifera, Embelia Robusta, Myrsinaceae.

Other Names: Vidanga, Viranga Chitratandoola, Vayuvilangam, Vizhal, Vrishanasana.

Description

These climbing herbs are found in India, Central and lower Himalayas, Sri Lanka and Singapore.

Parts Used: Berries (fruit), leaves, root bark

MEDICINAL APPLICATIONS

Action

Alterative, anthelmintic, carminative, stimulant.

Uses

—abdominal disorders
—constipation
—fungus
—gas
—indigestion
—headache
—heart disease
—hemorrhoids
—insanity
—lung disease
—mouth ulcers
—obesity
—pneumonia
—sore throat
—toothache
—worms

Decoction of the roots given in insanity and heart diseases. Powdered seeds are used to expel tape worms.

Dosage

Decoction, powder, paste, confections, cigarettes.

Safety

WARNING: USE OF THIS HERB MAY RESULT IN SEXUAL DEBILITY.

No other information about the safety of this herb is available.

USE CAUTION: AYURVEDIC HERBS ARE OFTEN TAKEN IN COMBINATION WITH OTHERS TO NEUTRALIZE THE TOXICITY ONE HERB WITH THE OPPOSING EFFECT OF OTHER. DO NOT TAKE EXCEPT UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL.

VIOLET

Biological Name: Radice violae, Violaceae.

Other Names: Violet, Zi hua di ding, viola, Yedoens violet.

Parts Used: Leaves and flowers.

Remedies For

Anti-inflammatory, antibiotic, demulcent.

This herb is used for inflammation, especially in the form of an abscess or boil, where it is topically applied as a poultice. The tea is useful for hot swellings of the throat, eyes, and ears, including such diseases as mumps and ulcers. It is also traditionally used in both Eastern and Western herbal traditions to soften and dissolve tumors.

Description

A Chinese herb.

Dosage

9–15 grams.

Safety

Violet should not be used by those who have a cold or deficiency condition.

VIRGINIA PRUNE BARK

Name: Wild Cherry Bark.

Biological Name: Prunus serotina Rosaceae.

Other Names: Wild Cherry Bark, Virginia Prune Bark.

Parts Used: Dried bark.

Active Compounds

—Prunasin, a cyanogenetic glycoside. The pharmacologists main interest in Wild Cherry Bark is due to the presence of the cyanogenetic glycoside prunasin.

—Benzaldehyde

—Miscellaneous; 3,4,5-trimethoxybenzoic acid (=eudesmic acid), p-coumaric acid, scopoletin (a coumarin derivative), tannins, sugars.

History

There is a long tradition of using wild cherry syrups to treat coughs and other lung problems. It has also been used to treat diarrhea and for relief of pain.

Remedies For

Anti-tussive, expectorant, astringent, nervine, anti-spasmodic.

Wild Cherry Bark is used mainly in the treatment of irritating coughs, bronchitis and whooping cough. It is used with other herbs in the control of asthma. Note that the inhibition of a cough does not equate with the healing of a chest infection; it should be treated. This herb may also be used as a bitter where digestion is sluggish. The cold infusion of the bark may be helpful as a wash in cases of inflammation of the eyes.

Traditional herbalists recommend this herb for rapid, weak circulation; continual irritative cough, with profuse muco-purulent expectoration; cardiac palpitation, from debility; dyspnoea; pyrexia; loss of appetite; and cardiac pain.

Combinations: May be used widely with many different herbs.

Description

Although native to North America, wild cherry trees now grow in many other countries.

Dosage

Infusion: Pour a cup of boiling water onto 1 teaspoonful of the dried bark and leave to infuse for 10–15 minutes. This should be drunk three times a day.

Tincture: Take 1–2 ml of the tincture three times a day.

Safety

Very large amounts of wild cherry pose the theoretical risk of causing cyanide poisoning. However, this has not been observed in clinical practice, making it a very safe herbal remedy. No other information available. Some herbs are known to react with your medication. Please consult your physician before starting on any herb.

WATERMELON

Name: Watermelon.

Biological Name: Citrulli vulgaris Cucurbitaceae.

Other Names: Watermelon, Xi gua.

Parts Used: Fruit, rind, seeds.

Remedies For

Diuretic, antipyretic. Watermelon is useful for symptoms of overexposure to heat. For this, the rind should also be consumed. The ground seeds are an excellent diuretic and can also be used for urinary tract infections.

Dosage

9–30 grams; I or 2 cups of the fresh juice is the best.

Safety

Watermelon should be avoided by those who have either too much dampness or too much coldness or a combination of both.

YUCCA

Name: Yucca.

Biological Name: Yucca schidigera.

Other Names: Yucca.

Parts Used: Stalk and root.

Active Compounds

The saponins from yucca are the main medicinal agents in the plant. They have both a water-soluble and fat-soluble end and therefore act like soap. The authors of the study looking at patients with osteoarthritis and rheumatoid arthritis speculate that yucca saponins block release of toxins from the intestines which inhibit normal formation of cartilage. An extract of one species of yucca has been found to fight melanoma cells in test tube studies.

History

Native Americans used the soapy leaves from yucca for numerous conditions. Poultices or baths were used for skin sores and other diseases as well as for sprains. Inflammation of all sorts, including joint inflammations, and bleeding were also treated with yucca. Some report that the Native Americans washed their hair with yucca to fight dandruff and hair loss.

Remedies For

Yucca is useful for the treatment of

—cancer

—osteoarthritis

—rheumatoid arthritis

Scientists have isolated a strong anti-tumor factor from fresh yucca flowers, which disappears when the plant wilts or dies. This was reported in a series of animal tests.

Description

This desert tree grows primarily in the southwestern United States and is related to the Joshua tree. Some of the species can reach a height of 15–60 feet whereas others may only reach a few yards in height.

Dosage

4 capsules of yucca twice daily on an empty stomach for arthritis remedy.

For cancer relief, make a concoction of freshly picked blossoms of yucca with carrot and mixed greens. Whip it in a fruit blender.

Safety

Yucca and other saponins can cause red blood cells to burst (known as "hemolysis") in test tubes. The level to which this occurs when the saponins are taken by mouth is unknown. However, yucca is approved for use in foods as a foaming agent (particularly in root beer). Since there have been no reports of problems with hemolysis in root beer drinkers, we can assume that yucca herbal supplements are generally safe.

PART—Three

Poisonous Herbs Plants and Trees

Common & Botanical Names

General Introduction

Cultivation & Distribution

Parts in Medicinal Use

Poisonous Properties

Antidotes

A

ACONITE

Botanical: Aconitum napellus (LINN.).

Family: N.O. Ranunculaciae.

Synonyms: Monkshood. Blue Rocket. Friar's Cap. Auld Wife's Huid.

Part Used: The whole plant.

Habitat: Lower mountain slopes of North portion of Eastern Hemisphere. From Himalayas through Europe to Great Britain.

Aconite is now found wild in a few parts of England, mainly in the western counties and also in South Wales, but can hardly be considered truly indigenous. It was very early introduced into England, being mentioned in all the English vocabularies of plants from the tenth century downwards, and in Early English medical recipes.

Introduction

The plant is a hardy perennial, with a fleshy, spindle-shaped root, palecoloured when young, but subsequently acquiring a dark brown skin. The stem is about 3 feet high, with dark green, glossy leaves, deeply divided in palmate manner and flowers in erect clusters of a dark blue colour. The shape of the flower is specially designed to attract and utilize bee visitors, especially the humble bee. The sepals are purple—purple being specially attractive to bees—and are fancifully shaped, one of them being in the form of a hood. The petals are only represented by the two very curious nectaries within the hood, somewhat in the form of a hammer; the stamens are numerous and lie depressed in a bunch at the mouth of the flower. They are pendulous at first, but rise in succession and place their anthers forward in such a way that a bee visiting the flower for nectar is dusted with the pollen, which he then carries to the next flower he visits and thereby fertilizes the undeveloped fruits, which are in a tuft in the centre of the stamens, each carpel containing a single seed.

In the Anglo-Saxon vocabularies it is called *thung*, which seems to have been a general name for any very poisonous plant. It was then called Aconite (the English form of its Greek and Latin name), later Wolf's Bane, the direct translation of the Greek *lycotonum*, derived from the idea that arrows tipped with the juice, or baits anointed with it, would kill wolves—the species mentioned by Dioscorides seems to have been *Aconitum lycotonum*. In the Middle Ages it became

Monkshood and Helmet-flower, from the curious shape of the upper sepal overtopping the rest of the flower. This was the ordinary name in Shakespeare's days.

The generic name is said to have been derived from, a dart, because it was used by barbarous races to poison their arrows, or from *akone*, cliffy or rocky, because the species grow in rocky glens. Theophrastus, like Pliny, derived the name from *Aconae*, the supposed place of its origin. The specific name, *Napellus*, signifies a little turnip, in allusion to the shape of the roots.

Cultivation

The chief collecting centres for foreign Aconite root have been the Swiss Alps, Salzburg, North Tyrol and Vorarlberg. Much was also formerly collected in Germany. Supplies from Spain and Japan are imported, so that the demand for English Aconite is somewhat restricted. The official Aconite is directed by the British Pharmacopceia to be derived only from plants cultivated in England, and a certain amount of home-grown Aconite has been regularly produced by the principal drug-farms, though good crops are grown with some difficulty in England, and cultivation of Aconite has not paid very well in recent years.

Aconite prefers a soil slightly retentive of moisture, such as a moist loam, and flourishes best in shade. It would probably grow luxuriantly in a moist, open wood, and would yield returns with little further trouble than weeding, digging up and drying.

In preparing beds for growing Aconite, the soil should be well dug and pulverized by early winter frosts—the digging in of rotten leaves or stable manure is advantageous.

It can be raised from seed, sown 1/2 inch deep in a cold frame in March, or in a warm position outside in April, but great care must be exercised that the right kind is obtained, as there are many varieties of Aconite- about twenty-four have been distinguished—and they have not all the same active medicinal properties. It takes two or three years to flower from seed.

Propagation is usually by division of roots in the autumn. The underground portion of the plants are dug up after the stem has died down, and the smaller of the 'daughter' roots that have developed at the side of the old roots are selected for replanting in December or January to form new stock, the young roots being planted about a foot apart each way.

The young shoots appear above ground in February. Although the plants are perennial, each distinct root lasts only one year, the plant being continued by 'daughter' roots.

This official Aconite is also the species generally cultivated in gardens, though nearly all the species are worth growing as ornamental garden flowers, the best perhaps being A. *Napellus,* both white and blue, *A. paniculatum, A. Japonicum and A. autumnale.* All grow well in shade and under trees. Gerard grew four species in his garden: *A. lyocotonum, A. variegatum, A. Napellus and A. Pyrenaicum.*

Part Used

Collection and Drying. The leaves, stem, flowering tops and root: the leaves and tops fresh, the root dried. The leaves and flowering tops are of less importance, they are employed for preparing Extract of Aconitum, and for this purpose are cut when the flowers are just *breaking* into blossom and the leaves are in their best condition, which is in June.

The roots should be collected in the autumn, after the stem dies down, but before the bud that is to produce the next year's stem has begun to develop. As this bud grows and forms a flowering stem, in the spring, some of the lateral buds develop into short shoots, each of which produces a long, slender, descending root, crowned with a bud.

These roots rapidly thicken, filled with reserve material produced by the parent plant, the root of which dies as the 'daughter' roots increase in size. Towards the autumn, the parent plant dies down and the daughter roots which have then reached their maximum development are now full of starch. If allowed to remain in the soil, the buds that crown the daughter roots begin to grow, in the late winter, and this growth exhausts the strength of the root, and the proportion of both starch and alkaloid it contains is lessened. On account of the extremely poisonous properties of the root, it is considered desirable that the root should be grown and collected under the same conditions, so that uniformity in the drug is maintained.

The British Pharmacopceia specifies, therefore, that the roots should be collected in the autumn from plants cultivated in Britain and should consist of the dried, full-grown 'daughter' roots: much of the Aconite root that used to come in large quantities from Germany was the exhausted parent root of the wild-flowering plants.

When the roots are dug up, they are sorted over, the smallest laid aside for replanting and the plumper ones reserved for drying. They are first well washed in cold water and trimmed of all rootlets, and then dried, either entire, or longitudinally sliced to hasten drying. Drying may at first be done in the open air, spread thinly, the roots not touching. Or they may be spread on clean floors or on shelves in a warm place for about ten days, turning frequently.

When somewhat shrunken, they must be finished more quickly by artificial heat in a drying room or shed near a stove or gas fire, care being taken that the heated air can escape at the top of the room. Drying in an even temperature will probably take about a fortnight or more. It is not complete till the roots are dry to the core and brittle, snapping when bent. Dried Aconite root at its upper extremity, when crowned with an undeveloped bud, enclosed by scaly leaves, is about 3/4 inch in diameter, tapering quickly downwards. It is dark brown in colour and marked with the scars of rootlets. The surface is usually longitudinally wrinkled, especially if it has been dried entire. The root breaks with a short fracture and should be whitish and starchy within.

A transverse section shows a thick bark, separated from the inner portion by a well-marked darker line, which often assumes a stellate appearance.

Aconite root as found in commerce is, however, often yellowish or brownish internally with the stellate markings not clearly shown, probably from having been collected too early. It should be lifted in the autumn of the second year.

Aconite root is liable to attack by insects, and after being well dried should be kept in securely closed vessels.

Chemical Constituents

Aconite root contains from 0.3 to 1 percent alkaloidal matter, consisting of Aconitine—crystalline, acrid and highly toxic—with the alkaloids Benzaconine (Picraconitine) and Aconine.

Aconitine, the only crystallizable alkaloid, is present to the extent of not more than 0.2 percent, but to it is due the characteristic activity of the root. Aconite acid, starch, etc., are also present. On incineration, the root yields about 3 percent ash.

The Aconitines are a group of highly toxic alkaloids derived from various species of Aconite, and whilst possessing many properties in common are chemically distinguishable according to the source from which they are obtained. The Aconitines are divided into two groups: (1) the Aconitines proper, including Aconitine, Japaconitine and Indaconitine, and (2) the Pseudaconitines –Pseudaconitine and Bikhaconitine.

This disparity between Aconites is a very important matter for investigation, though perhaps not so serious from a pharmaceutical point of view as might at first appear, since in the roots of several different species the alkaloid is found to possess similar physiological action; but this action varies in degree and the amount of alkaloid may be found to vary considerably. It is considered that the only reliable method of standardizing the potency of any of the Aconite preparations is by a physiological method: the lethal dose for the guinea-pig being considered to be the most convenient and satisfactory standard. Tinctures vary enormously as to strength, some proving seven times as powerful as others.

The Aconite which contains the best alkaloid, A. Napellus, is the old-fashioned, familiar garden variety, which may be easily recognized by its very much cut-up leaves, which are wide in the shoulder of the leaf—that part nearest the stem—and also by the purplish-blue flowers, which have the 'helmet' closely fitting over the rest of the flower, not standing up as a tall hood. All varieties of Aconite are useful, but this kind with the close set in helmet to the flower is the most valuable.

The Aconite derived from German root of A. Napellus appears to possess somewhat different properties to that prepared from English roots. The German roots may be recognized by the remains of the stem which crown the root. They are also generally less starchy, darker externally and more shrivelled than the English root and considered to be less active, probably because they are generally the exhausted parent roots.

Medicinal Action and Uses

Anodyne, diuretic and diaphoretic. The value of Aconite as a medicine has been more fully realized in modern times, and it now rank as one of our most useful drugs. It is much used in homoeopathy. On account of its very poisonous nature, all medicines obtained from it come, however, under Table 1 of the poison schedule: Aconite is a deadly poison.

Both tincture and liniment of Aconite are in general use, and Aconite is also used in ointment and sometimes given as hypodermic injection. Preparations of Aconitc are employed for outward application locally to the skin to diminish the pain of neuralgia, lumbago and rheumatism.

The official tincture taken internally diminishes the rate and force of the pulse in the early stages of fevers and slight local inflammations, such as feverish cold, laryngitis, first stages of pneumonia and erysipelas; it relieves the pain of neuralgia, pleurisy and aneurism. In cardiac failure or to prevent same it has been used with success, in acute tonsilitis children have been well treated by a dose of 1 to 2 minims for a child 5 to 10 years old; the dose for adults is 2 to 5 minims, three times a day.

Note: The tincture of Aconite of the British Pharmacopoeia 1914 is nearly double the strength of that in the old Pharmacopoeia of 1898.

Externally the liniment as such or mixed with chloroform or belladonna liniment is useful in neuralgia or rheumatism.

Poisoning from, and Antidotes

The symptoms of poisoning are tingling and numbness of tongue and mouth and a sensation of ants crawling over the body, nausea and vomiting with epigastric pain, laboured breathing, pulse irregular and weak, skin cold and clammy, features bloodless, giddiness, staggering, mind remains clear. A stomach tube or emetic should be used at once, 20 minims of Tincture of Digitalis given if available, stimulants should be given and if not retained diluted brandy injected per rectum, artificial respiration and friction, patient to be kept lying down.

All the species contain an active poison Aconitine, one of the most formidable poisons which have yet been discovered: it exists in all parts of the plant, but especially in the root. The smallest portion of either root or leaves, when first put into the mouth, occasions burning and tingling, and a sense of numbness immediately follows its continuance. One-fiftieth grain of Aconitine will kill a sparrow in a few seconds; one-tenth grain a rabbit in five minutes. It is more powerful than prussic acid and acts with tremendous rapidity. One hundredth grain will act locally, so as to produce a well-marked sensation in any part of the body for a whole day. So acrid is the poison, that the juice applied to a wounded finger affects the whole system, not only causing pains in the limbs, but a sense of suffocation and syncope.

Some species of Aconite were well known to the ancients as deadly poisons. It was said to be the invention of Hecate from the foam of Cerberus, and it was a species of Aconite that entered into the poison which the old men of the island of Ceos were condemned to drink when they became infirm and no longer of use to the State. Aconite is also supposed to have been the poison that formed the cup which Medea prepared for Theseus. (*Note*—Aconite and Belladonna were said to be the ingredients in the witches' 'Flying ointments.' Aconite causes irregular action of the heart, and Belladonna produces delirium. These combined symptoms might give a sensation of 'flying.'—Editor)

Various species of Aconite possess the same narcotic properties as A. Napellus, but none of them equal in energy the A. ferox of the East Indies, the root of which is used there as an energetic poison under the name of Bikh or Nabee. Aconite poisoning of wells by A. ferox has been carried out by native Indians to stop the progress of an army. They also use it for poisoning spears, darts and arrows, and for destroying tigers. All children should be warned against Aconite in gardens. It is wiser not to grow Aconite among kitchen herbs of any sort.

The root has occasionally been mistaken for horse-radish, with fatal results—it is, however, shorter, darker and more fibrous—and the leaves have produced similar fatal results. In Ireland a poor woman once sprinkled powdered Aconite root over a dish of greens, and one man was killed and another seriously affected by it.

In 1524 and 1526 it is recorded that two criminals, to whom the root was given as an experiment, quickly died.

The older herbalists described it as venomous and deadly. Gerard says: 'There hath beene little heretofore set down concerning the virtues of the Aconite, but much might be saide of the hurts that have come thereby.' It was supposed to be an antidote against other poisons.

Gerard tells us that its power was 'So forcible that the herb only thrown before the scorpion or any other venomous beast, causeth them to be without force or strength to hurt, insomuch that they cannot moove or stirre untill the herbe be taken away.' Ben Jonson, in his tragedy Sejanus, says:

'I have heard that Aconite
Being timely taken hath a healing might
Against the scorpion's stroke.'

Linnaeus reports Aconite to be fatal to cattle and goats when they eat it fresh, but when dried it does no harm to horses, a peculiarity in common with the buttercups, to which the Aconites are related. Field-mice are well aware of its evil nature, and in hard times, when they will attack almost any plant that offers them food, they leave this severely alone.

Other Varieties

Japanese Aconite—syn. *Aconitum Chinense*—is regularly imported in considerable quantities. It used formerly to be ascribed to *A. Fischer* (Reichb.), but is now considered to be derived from *A. uncinatum, var. Faponicum* (Regel.) and possibly also from *A. volubile* (Pallas). It has conical or top-shaped, gradually tapering tuberous roots, 1 to 2 inches long, 1/3 to 1 inch in thickness at the top, externally covered with a brown, closely adhering skin internally white. Dried roots do not contain much alkaloid, if steeped when fresh in a mixture of common salt, vinegar and water. The poisonous alkaloid present is called Japaconitine, to distinguish it from the official Aconitine and the Pseudaconitine of *A. laciniatum*. Japaconitine is similar in constituents and properties with the Aconitine of *A. Napellus*.

Indian Aconite root or Nepal Aconite consists of the root of *A. laciniatum* (Staph.). It is also called Bikh or Bish, and is collected in Nepal. It is much larger than the English variety, being a conical, not suddenly tapering root, 2 to 4 inches long and an inch or more at the top, of a lighter brown than the official variety, the rootlet scars much fewer than the official root. Internally it is hard and almost resinous, the taste intensely acrid and is much shriveiled longitudinally. This root yields a very active alkaloid, Pseudoaconitine, which is allied to Aconitine and resembles it in many of its properties; it is about twice as active as Aconitine. Indian Aconite root was formerly attributed to *A. ferox* (Wall).

Their large size and less tapering character sufficiently distinguish these from the official drug.

Other varieties of Aconite are *A. chasmanthum* (Staph.), known in India as Mohri, which contains Indaconitine, and *A. spicatum*, another Indian species containing Bikhaconitine, resembling Pseudaconitine.

Russian Aconite, *A. orientale*, grows abundantly in the Crimea and Bessarabia. It has a small, compact, greyish-black root with a transverse section similar to that of *A. Napellus*. Its taste is hot and acrid. When treated by a process which gave 0.0526 percent of crystalline Aconitine from a sample of powdered root of *A. Napellus*, the dried root of *A. orientale* yielded 2.207 percent of total alkaloids, which were, however, amorphous. The total alkaloid has not yet been investigated further.

A. heterophyllum (Wall), Atis root, is a plant growing in the Western temperate Himalayas. This species does not contain Aconitine and is said to be non-poisonous. Its chief constituent is an intensely bitter alkaloid—*Atisine*—possessing tonic and antiperiodic principles. *A. palmatum*, of Indian origin, yields a similar alkaloid, Palmatisine.

The province of Szechwen in West China grows large quantities of medicinal plants, among them *A. Wilsoni*, which is worth about 4s. per cwt., of which 55,000 lb. a year can be produced in this province; *A. Fischeri*, about four times the price, of which rather less are yearly available, and *A. Hemsleyan*, about the same price as the latter, of which about 27,000 lb. are available in an average year.

Other Species

The Anthora, or Wholesome Aconite described by Culpeper, is a small plant about a foot high, with pale, divided green leaves, and yellow flowers—a native of the Alps. Its stem is erect, firm, angular and hairy; the leaves alternate and much cut into. The flowers are large, hooded with fragrant scent, growing on top of the branches in spikes of a pale yellow colour, smaller than the ordinary Monkshood and succeeded by five horn-like, pointed pods, or achenes, containing five angular seeds. It flowers in July and the seeds ripen at the end of August. The root is tuberous.

Culpeper tells us that the herb was used in his time, but not often. It was reputed to be very serviceable against vegetable poisons and 'a decoction of the root is a good lotion to wash the parts bitten by venomous creatures.' . . . 'The leaves, if rubbed on the skin will irritate and cause soreness and the pollen is also dangerous if blown in the eyes. ' As a matter of fact, this species of Aconite by no means deserves its reputation of harmlessness, for it is only poisonous in a less degree than the rest of the same genus, and the theory that it is a remedy against poison, particularly that of the other Aconites, is now an exploded one.

Parkinson, speaking of the Yellow Monkshood, calls it:

'The "counter-poison monkeshood"—the roots of which are effectual, not only against the poison of the poisonful Helmet Flower and all others of that kind, but also against the poison of all venomous beasts, the plague or pestilence and other infectious diseases, which raise spots, pockes, or markes in the outward skin, by expelling the poison from within and defending the heart as a most sovereign cordial.' The so-called Winter Aconite, Aeranthis hyemalis, is not a true Aconite, though closely allied, being also a member of the Buttercup family, whose blossoms it more nearly resembles.

APPLE (BALSAM)

Botanical: Momordica balsamina.

Family: N.O. Cucurbitaceze.

Synonyms: Balsamina.

Part Used: The fruit deprived of the seeds.

Habitat: East India.

Introduction

A climbing annual plant cultivated in gardens for the sake of its ornamental fruit, which is of a rich orange red colour, ovate attenuated towards each extremity, angular, warty, not unlike a cucumber. The name is derived from Mordio, to bite, so called from the bitten appearance.

Constituents

Has not been examined qualitatively.

Medicinal Action and Uses

A liniment is made by adding the pulped fruit (without the seeds) to almond oil. This is useful for piles, burns, chapped hands, etc. The pulp is also used as a poultice. The fluid extract is used for dropsy.

Caution is required in administering—large doses resulting in death.

Dosage and Preparation

Dose, 6 to 15 grains.

Poisons and Antidotes

As for Bitter Apple.

Other Species

Momordica charantia and East Indian species with bright orange yellow oblong fruits. Momordica mixta has fruit shaped like a bullock's heart, bright red in colour.

APPLE (BITTER)

Botanical: Citrullus colocynthis (SCHRAD.).

Family: N.O. Cucurbilaceae.

Synonyms: Colocynth Pulp. Bitter Cucumber.

Part Used: The dried pulp.

Habitat: Native of Turkey abounding in the Archipelago; also found in Africa (Nubia especially), Asia, Smyrna and Trieste.

Introduction

The Colocynth collected from the Maritime Plain between the mountains of Palestine and the Mediterranean, is mainly shipped from Jaffa and known as Turkish Colocynth. This is the best variety. It is an annual plant resembling the common watermelon. The stems are herbaceous and beset with rough hairs; the leaves stand alternately on long petioles.

They are triangular, manycleft, variously sinuated, obtuse, hairy, a fine green on upper surface, rough and pale under. Flowers yellow, appearing singly at axils of leaves; fruit globular, size of an orange, yellow and smooth, when ripe contains within a hard coriaceous rind, a white spongy pulp enclosing numerous ovate compressed white or brownish seeds.

Constituents

The pulp contains Colocynthin, extractive, a fixed oil, a resinous substance insoluble in ether, gum, pectic acid or pectin, calcium and magnesium phosphates, lignin and water.

Medicinal Action and Uses

It is a powerful drastic hydragogue cathartic producing, when given in large doses, violent griping with, sometimes, bloody discharges and dangerous inflammation of the bowels. Death has resulted from a dose of 1 1/2 teaspoonsful of the powder. It is seldom prescribed alone. It is of such irritant nature that severe pain is caused if the powdered drug be applied to the nostrils; it has a nauseous, bitter taste and is usually given in mixture form with the tinctures of podophylum and belladonna. Colocynth fruits broken small are useful for keeping moth away from furs, woollens, etc.

Dosage and Preparation

Dose of the powder, 2 to 5 grains.

It is an important ingredient in Extractum Colocynthidis Compositum, Pilula Colocynthidis Composita, and Pilula Colocynthidis et Hyosiyami.

Poison and Antidotes

case of poisoning by Colocynth the stomach should be emptied, opium given by mouth or rectum followed by stimulants and demulcent drinks.

AMERICAN ARUM

Botanical: Arum maculatum.

Family: N.O. Araceae.

Synonym: Wild Turnip. Jack-in-the-Pulpit.

Part Used: Root.

The American Arum (*Arum triphyllum*, Limn), Dragon Root, has similar characters and properties to the above.

It is very common in eastern North America, in moist places, where it is known as Indian Turnip, Wild Turnip, Jack-in-thePulpit, Devil's Ear, Pepper Turnip, Wake Robin, etc.

It grows 1 to 3 feet high; a green spathe, broadly striped with brown purple, arches over and encloses the spadix.

The corm is smaller than the English species, 1/2 to 2 inches broad and about half as high. It is very acrid when fresh, but loses this property when cooked, or partially when dried.

For the drug market it is collected in the early spring, transversely sliced and dried, and is employed in both herbal and homoeopathic treatment.

It has acrid, stimulant, diaphoretic and expectorant properties, and is said to be useful when taken immediately after eating, to assist digestion and promote assimilation.

It is considered a stimulant to the lungs in consumption, asthma and chronic forms of lung complaints, and to be of great value in hoarseness, coughs, asthma, rheumatism and lung diseases.

Owing to its acrimony, it is usually given in powder in honey or syrup, or mixed with fine sugar.

In the absolutely fresh state, both English and American Arums are violent irritants to the mucous membrane, producing when chewed, intense burning to the mouth and throat, and if taken internally, causing violent gastro-enteritis, which may end in death.

Dose

Powdered root 10 to 30 grains.

The Italian Arum drug of Southern Europe is derived from the Mediterranean *A. Italicum* (Mill.), which is found also in the Isle of Wight. It has the same poisonous properties.

That of Asia Minor, with similar properties, is *A. dioscorides*, Sib.

In *A. Italicum* and some of the other species, the spadix which supports the flowers disengages a quantity of heat, sufficient to be felt by the hand that touches it. Lamarck mentions an extraordinary degree of heat evolved by *A. maculatum* about the time when the sheath is about to open.

The Dragon Arum of the ancients was probably *Amorphophallus* campanulatus (Pol.) of the East Indies, whose corm-like rhizome gives rise yearly to one enormous leaf and an equally gigantic inflorescence. Its dirty red and yellow colour and foetid smell attract numbers of carrion flies, by which it is fertilized; they are often so deceived as to lay their eggs on the spadix.

The Arrow poison, *Maschi*, of Guiana, is supposed to come from a species of Arum.

On account of their starch, the rhizomes and tubers of many other species of this family are used as foods, or the starches are extracted. Even those which are poisonous may be thus employed, since cooking usually destroys their toxicity.

The most important, edible product is the corm of *Calocasia antiquorum* (Schott) (syn. Caladium, or *A. esculentum*, Linn.), Taro, which is one of the most largely used of tropical foods. Other species are similarly used. It abounds in starch and is much used as an article of food by the natives of Hawaii and other Pacific Islands. In the natural state, both the foliage and roots of Taro have all the pungent acrid qualities that mark the genus to which the plant belongs, but these are so dissipated by cooking that they become mild and palatable with no peculiar flavour more than belongs to good bread. The islanders bake the root in ovens in the same way as Bread Fruit, then beat it into a mass like dough, called Poe.

In India, a liniment is made of the root of *Calocasia macrorhiza* and Gingilie oil, and used by the native practitioners for frictions to cure intermittent fevers.

In South America, *A. Indicum*, the Mankuchoo and Manguri of Brazil, is much cultivated about the huts of the natives for its esculent stem and pendulous tubers.

Arum Arrowroot is derived from *A. Dracunculus* (Linn.), being something like Tapioca.

The root of *A. montanum* is used in India to poison tigers. The roots of *A. lyratum* furnish an article of diet to the natives of the Circar mountains. They require, however, to be carefully boiled several times, and dressed in a particular manner, to divest them of a somewhat disagreeable taste.

A. Dracunculus is sometimes cultivated in gardens for the sake of its large pedate leaves, its spotted stem and handsome purple spadix.

It is well, however, to advise those intending to add this plant to their gardens that though its lurid and striking spadix forms a handsome feature in a border yet its odour is decidedly strong and unpleasant resembling that of putrid meat, a fact which is evidently perceived by insects who swarm to it, especially in hot weather.

AMERICAN COWBEAN

Botanical: Circuta maculata.

Family: N.O. Umbelliferae.

The American Cowbane is closely analogous to the European species, and also possesses very poisonous properties. In several instances, children have been fatally poisoned by eating its roots. It is said to be the most poisonous plant native to the United States.

Although it has been recommended as a remedy in nervous and sick headaches, it is very rarely used.

No complete analysis of the plant has been published, but the alkaloid termed Cicutine, present in the European species, is said to exist in it. The seed is stated to contain an alkaloid identical with Coniine.

The root of this American variety is even more virulent than the English one.

ASCLEPIAS

Family: N.O. Asclepiadaceae.

This genus consists of herbaceous plants with a milky juice, which are for the most part natives of America. Several species are cultivated for the sake of their showy flowers. All of them are more or less poisonous. Asclepias curassavica is employed in the West Indies as an emetic, and goes by the name of Ipecacuanha: the drug known in medicine by that name is derived from quite a different plant and must not be confused with it. *A. tuberosa*, the Butterfly-weed, has mild purgative properties, and promotes perspiration and expectoration. *A. syriaca*, a plant misnamed, as it is a native of America and Canada, is frequently to be met with in gardens; its dull red flowers are very fragrant, and the young shoots are eaten as asparagus in Canada, where a sort of sugar is also prepared from the flowers, while the silk-like down of the seeds is employed to stuff pillows. Some of the species furnish excellent fibre, which is woven into muslins, and in certain parts of India is made into paper.

In Hindu mythology, Soma—the Indian Bacchus- and one of the most important of the Vedic gods, is a personification of the Soma plant, *A. acida*, from which an intoxicating milky juice is squeezed. All the 114 hymns of the ninth book of the Rig Veda are in his praise. The preparation of the Soma juice was a very sacred ceremony and the worship of the god is very old. The true home of the plant was fabled to be in heaven, Soma being drunk by gods as well as men, and it is under its influence that Indra is related to have created the universe and fixed the earth and sky in their place. In postVedic literature, Soma is a regular name for the moon, which is regarded as being drunk by the gods and so waning, till it is filled up again by the Sun. In both the Rig Veda and Zend Avesta, Soma is the king of plants; in both, it is a medicine which gives health, long life and removes death.

The three species of Asclepias most used in medicine are the Calotropis procera, *A. tuberosa* (Pleurisy root) and *A. Incarnata* (Swamp Milkweed).

It is a very common roadside weed in the eastern and central states of North America, where it is called 'Silkweed,' from the silky down which surmounts the seed, being an inch or two in length, and which has been used for making hats and for stuffing beds and pillows. Attempts have been made to use it as a cotton substitute. Both in France and Russia it has had textile use. The fibres of the stem, prepared in the same manner as those of hemp and flax, furnish a very long, fine thread, of a glossy whiteness.

Medicinal Action and Uses

The plant is used medicinally in the United States for the anodyne properties of its root and its rhizome and root have been employed successfully, like those of *A. tuberosa*, both in powder and infusion, in cases of asthma and typhus fever attended with catarrh, producing expectoration and relieving cough and pain. It has also been used in scrofula with great success.

Constituents

It has a very milky juice, which is used as a domestic application to warts. The juice has a faint smell and subacid taste and an acid reaction. It contains a crystalline substance of a resinous character, closely allied to lactucone and called Asclepione; also wax-like, fatty matter, caoutchouc, gum, sugar, salts of acetic acid and other salts.

Besides the above-named species, various other species of the genus have been used medicinally.

An indigenous North American species *A. verticillata* (Linn.), is used in the Southern States as a remedy in snake bites and the bites of venomous insects. Twelve fluid ounces of a saturated decoction are said to cause an anodyne and sudorific effect, followed by gentle sleep.

From *A. vincetoxicum* (Linn.), 'TamePoison,' besides the glucoside Asclepiadin said closely to resemble emetine in its physiological properties, the glucoside Vincetoxir has been isolated. The root of this species sometimes occurs in commercial Senega Root (Polygala Senega).

An infusion of its root was formerly recommended in dropsical cases and disorders peculiar to women, as well as for promoting perspiration in fevers, measles and other eruptive complaints, but is now much less used.

A. curas-savica (Blood-weed and Redhead) is also called in the West Indies 'Bastard Ipecacuanha.'

It is a native of the West Indies, abounding especially in Nevis and St. Kitts.

Both root and expressed juice are emetic, the former in the dose of 20 to 40 grains, the latter in that of a fluid ounce.

They are also cathartic and vermifuge in somewhat smaller doses (*Amer. Journ.* Ph. XIX, 19). The juice, made into a syrup, is given as a powerful anthelmintic to children in the West Indies. The plant is used by the negroes as an emetic and the root as a purgative.

According to the *Kew Bulletin*, 1897 this plant has insecticidal properties, being especially obnoxious to fleas. The rooms infected are thoroughly swept with rough brooms made from the weed and the pests are said to disappear. D. St. Cyr commends it in phthisis (*Ph. Journ.*, 1903, 714).

Other Species

A. Pulchra (Ehrh.), by many regarded as

a variety of incarnata, from which it is distinguished by its hairiness, the other being nearly smooth, is indiscriminately used under the same names.

A. syrica (Willd.) (A. Cornuti, Decaisne), found abundantly in Syria, cultivated in some parts of Europe.

B

BANEBERRY

Botanical: Actaea spicata (LINN.).

Family: N.O. Ranunculacea.

Synonyms: Herb Christopher. Bugbane. Toadroot.

Part Used: Root.

Habitat: It is to be found in copses on limestone in Yorkshire and the Lake District, but is so uncommon as to be regarded by some botanists as almost a doubtful native.

The Baneberry, or Herb Christopher, is a rather rare British plant belonging (like the Paeony) to the Buttercup order, but distinguished from all other species in the order by its berry-like fruit. It is considered to have similar anti-spasmodic properties to the Paeony.

Introduction

The black, creeping root-stock is perennial, sending up each year erect stems, growing 1 to 2 feet high, which are triangular and either not branched, or very sparingly so. The foot-stalks of the leaves are long and arise from the root. These divide into three smaller foot-stalks, and are so divided or re-divided that each leaf is composed of eighteen, or even twenty-seven, lobes or leaflets.

The flower-stem arises from the roots and has leaves of the same form, but smaller. The flowers grow in spikes and are of a pure white.

The whole plant is dark green and glabrous (without hairs), or only very slightly downy. It flowers in June and in autumn ripens its fruits, which are egg-shaped berries, 1/2 inch long, black and shining, many-seeded and very poisonous, well justifying the popular name of Baneberry.

The plant is of an acrid, poisonous nature throughout, and though the root has been used in some nervous cases, and is said to be a remedy for catarrh, it must be administered with great caution.

Medicinal Action and Uses

Antispasmodic. The juice of the berries, mixed with alum, yields a black dye.

There are two varieties of this species, one of British origin, only distinguished from the rest of the species by its berries being red, instead of black and the other an American plant (Actaea alba, or White Cohosh) with white berries. Both varieties grow in the writer's garden.

The American species is considered by the natives a valuable remedy against snake-bite, especially of the rattlesnake, hence it is—with several other plants—sometimes known as one of the 'Rattlesnake herbs.'

It is said the name 'Herb Christopher' was also formerly applied to the flowering fern, Osmunda regalis.

The name of the genus is from the Greek acte, the elder, which these plants resemble as regards the leaves and berries.

Toads seem to be attracted by the smell of the Baneberry, which causes it also to be termed Toadroot, the name arising possibly also from its preference for the damp shady situations in which the toad is found.

It is also called Bugbane, because of its offensive smell, which is said to drive away vermin.

Closely allied to this plant, and at one time assigned to the same genus, is the plant known as Black Cohosh.

BINDWEED, JALAP

Botanical: Convolvulus Jalapa (LINN.).

Synonym: Ipomea purga.

Habitat: The Jalap Bindweed (*C. Jalapa*, Linn.), but more often called *Ipomea Jalapa* or purga, is a native of South America and Mexico. It derives its name from Xalapa, in Mexico, where it is very abundant.

It is freely grown out of doors, however, in the southern countries of Europe, and plants have been grown here in the garden of the Society of Apothecaries and also in Norfolk and Hampshire.

Introduction

It is a handsome climbing convolvulaceous plant with crimson flowers and a tuberous root, which is of officinal value.

The tubers, varying in size from a walnut to an orange, are dark, umber-brown in colour and much wrinkled. They are imported either whole or sliced.

Medicinal Action and Uses

The drug Jalap is prepared from a resin which abounds in the roots. It has a slight smoky odour and the taste is unpleasant, followed by pungent acridity. It has strong cathartic and purgative action, and is used in constipation, pain and colic in the bowels and general intestinal torpor, being combined, in compound powder, with other laxatives, and with carminatives such as ginger, cloves, etc. It accelerates the action of rhubarb.

Jalap forms a safe purge for children, being given in sugar or jam to disguise the taste, and has been used thus with calomel or wormwood as a vermifuge. It proves an excellent purge in rheumatism.

Preparations

Powdered root, 3 to 20 grains. Tincture, B.P., 1/2 to 1 drachm. Powdered resin, 2 to 5 grains. Compound powder, B.P., 1 to 2 drachms. Jalapin, 1 to 3 grains.

Other members of this Convolvulus family have economic uses. C. dissectus, an American species abounds in prussic acid, the liquor known as Noyau being prepared from it with the aid of alcohol, and the oil of Rodium, which is so attractive to rats as to cause them to swarm to it without fear, even if held in the hand of a rat-catcher, is the produce of another Convolvulus, known as C. Rhodorhiza.

One of the most important members of the order economically is *C. Batatas*, the tuberous-rooted Bindweed, or SWEET POTATO, the roots of which abound in starch and sugar and form a nourishing food, very valuable in the tropics, where it is largely cultivated. The roots are somewhat in shape like an oblong and ugly potato, often club-shaped, and are of a reddish colour. When cooked, they are excessively sweet, not unlike liquorice, and not attractive in appearance. They are usually of greater size and weight than ordinary potatoes. Before the introduction of the Potato into Europe, the Sweet Potato was regularly imported as a wholesome article of diet, and was grown in Spain and Portugal, to which it had been brought from the West Indies. The Potato which Shakespeare mentions twice—in the Merry Wives of Windsor and in Troilus and Cressida—is the Sweet Potato, and not the more familiar tuber of our days.

BLOODROOT

Botanical: Sanguinaria Candensis (LINN.).

Family: N.O. Papaveraceae.

Synonyms: Indian Paint. Tetterwort. Red Pucoon. Red Root. Paucon. Coon Root. Snakebite. Sweet Slumber.

Parts Used: Root, whole plant.

Habitat: United States of America and Canada, found in rich open woods from Canada, south to Florida and west to Arkansas. and Nebraska.

Introduction

A perennial plant, one of the earliest and most beautiful spring flowers. In England it will grow freely if cultivated carefully, it has even grown in the open in gravelly dry soil in the author's garden. It has a lovely white flower and produces only a single leaf and a flowering scape about 6 inches high. When the leaf first appears it is wrapped round the flower bud and is a greyish-green colour covered with a downy bloom—Leaves palmate five to nine lobed, 6 to 10 inches long. After flowering the leaves increase in size, the underside paler showing prominent veins. The white flower is wax-like with golden stamens. The seed is an oblong narrow pod about 1 inch long. The rootstock is thick, round and fleshy, slightly curved at ends, and contains an orange-red juice, and is about 1 to 4 inches long, with orange-red rootlets. When dried it breaks with a short sharp fracture, little smell, taste bitter acrid and persistent, powdered root causes sneezing and irritation of the nose. The root is collected in the autumn, after leaves die down; it must be stored in a dry place or it quickly deteriorates.

Constituents

Alkaloids Sanguinarine, Chelerythrine, Protopine and B. homochelidonine; Sanguinarine forms colourless crystals. Chelerythrine is also colourless and crystalline. Protopine (also found in opium) is one of the most widely diffused of the opium alkaloids. The rhizome also contains red resin and an abundance of starch.

Medicinal Action and Uses

Emetic cathartic expectorant and emmenagogue, and of great value in atonic dyspepsia, asthma, bronchitis and croup. (The taste is so nauseating, that it may cause expectorant action.) Of value in pulmonary consumption, nervous irritation and helpful in lowering high pulse, and in heart disease and weakness and palpitation of heart of great use. For ringworm apply the fluid extract. Also good for torpid liver, scrofula, dysentery. It is applied to fungoid growths, ulcers fleshy excrescences, cancerous affections and as an escharotic. Sanguinaria root is chiefly used as an expectorant for chronic bronchitis and as a local application in chronic eczema, specially when secondary to varicose ulcers. In toxic doses, it causes burning in the stomach, intense thirst, vomiting, faintness vertigo, intense prostration with dimness of eyesight. The root has long been used by the American Indians as a dye for their bodies and clothes and has been used successfully by American and French dyers.

Preparations and Dosages

Fluid extract of Sanguinaria, U.S.P., dose 1 1/2 minims. Tincture of Sanguinaria, U.S.P., 15 minims. Powdered root, 10 to 30 grains. Sanguinarin, 1/4 to 1 grain. Fluid extract, 10 to 30 drops.

BRYONY, BLACK

Botanical: Tamus communis (LINN).

Family: N.O. Dioscoreaceae.

Synonym: Blackeye Root.

Part Used: Root.

Black Bryony belongs to a family of twining and climbing plants which generally spring from large tubers, some of which are cultivated for food, as the Yam, which forms an important article of food in many tropical countries.

Great Britain only furnishes one species of this tribe, Tamus communis, which, from its powerful, acrid and cathartic qualities, ranks as a dangerous irritant poison. It is a very common plant in woods and hedges, with weak stems twining round anything within reach, and thus ascending or creeping among the trees and bushes to a considerable distance.

Introduction

The leaves are heart-shaped pointed, smooth and generally shining as if they had been varnished. Late in autumn they turn dark purple or bright yellow, making a very showy appearance. In winter, the stems die down, though the root is perennial.

The flowers are small, greenish-white, in loose bunches and of two kinds, barren and fertile on different plants, the latter being succeeded by berries of a red colour when ripe. The large, fleshy root is black on the outside and exceedingly acrid, and, although an old cathartic medicine, is a most dangerous remedy when taken internally. It is like that of the yam, thick and tuberous and abounding in starch, but too acrid to be used as food in any manner.

The young shoots are said to be good eating when dressed like Asparagus- the Moors eat them boiled with oil and salt, after they have been first soaked in hot water.

Gerard says of this plant:

'The wild black Briony resembleth the white Briony vine, but has not clasping tendrils and is easier to be losed. The root is black without and of a pale yellow colour within, like Box. It differs from white Briony only in that the root is of a yellow box colour on the inside, and the fruit or berries are black when they come to ripeness.'

As to the colour of the berries, Gerard is at fault: they are bright red. Other writers have also made the same mistake. The root is nearly cylindrical, 1 to 1 1/2 inch in diameter, 3 to 4 inches long or more, and black.

Medicinal Action and Uses

Rubifacient, Diuretic: The expressed juice of the fresh root, mixed with a little white wine, has been used as a remedy for gravel, being a powerful diuretic, but it is not given internally now, and is not included in the British Pharmacopoeia.

Death in most painful form is the result of an overdose, while the effect of a small quantity, varying not with the age only, but according to the idiosyncrasies of the patient, leaves little room for determining the limit between safety and destruction.

The expressed juice of the root, with honey, has also been used as a remedy for asthmatic complaints, but other remedies that are safer should be preferred. The berries act as an emetic, and children should be cautioned against eating them.

As an external irritant, Black Bryony has, however, been used with advantage, and it was formerly much employed. The scraped pulp was applied as a stimulating plaster, and in gout, rheumatism and paralysis has been found serviceable in many instances.

A tincture made from the root proves a most useful application to unbroken chilblains, and also the *fruits*, steeped in gin, are used for the same remedy. Black Bryony is a popular remedy for removing discoloration caused by bruises and black eyes, etc.

The fresh root is scraped to a pulp and applied in the form of a poultice. For sores, old writers recommend it being made into an ointment with 'hog's grease or wax, or other convenient ointment.'

The generic name *Tamus* is given to the plant from the belief that it is the same as that referred to in the works of Pliny under the name of Uva *Taminia*. The Greeks use the young suckers like Asparagus, which they much resemble.

T. cretica is a native of Greece and the Greek Archipelago.

Preparation

Tincture, 1 to 5 drops.

BRYONY, EUROPEAN WHITE

Botanial: Bryonia alba (LINN.).

Family: N.O. Cucurbitaceae.

Synonyms: Black-berried White Bryony. European White Bryony.

Part Used: Root.

The Black-berried White Bryony is a plant very similar in general appearance to *Bryonia dioica*, having also palmate rough leaves and similar unisexual flowers, which are succeeded, however, by globular *black berries*.

The root is very similar to that of *Bryonia* dioica and contains the same substances, but it is stated also to contain a glucoside Brein, which causes the drug to produce a somewhat different physiological effect. The tincture is used by homoeopathists, and is said to be one of the best diuretics in medicine. It is an excellent remedy in gravel and all other obstructions and disorders of the urinary passages, and has also been used for relieving coughs and colds of a feverish, bronchial nature.

Preparation

Fluid extract, 1/6 to 1 drachm Bryonin, 1/4 to 2 grains.

BRYONY, WHITE

Botanical: Bryonia dioica (LINN.).

Family: N.O. Cucurbitaceae.

Synonyms: English Mandrake. Wild Vine. Wild Hops. Wild Nep. Tamus. Ladies' Seal. Tetterbury. (French) Navet du diable.

Part Used: Root.

Habitat: The Cucumber tribe has a single representative among our wild plants in the Red-berried, common or White Bryony. This is a vine-like plant growing in woods and hedges, and exceedingly common in the south of England, rarer in the Midland counties, and not often found in the north of England. It is of frequent occurrence in central and southern Europe.

Introduction

The stems climb by means of long tendrils springing from the side of the leaf stalks, and extend among the trees and shrubs often to the length of several yards during the summer, dying away after ripening their fruit. They are angular and brittle, branched mostly at the base, and are, as well as the somewhat vine-shaped leaves very rough to the touch, with short, prickle like hairs—a general character of the exotic plants of this order.

The leaves are stalked, with the stalk curved, shorter than the blade, which is divided into five lobes, of which the middle one is the longest—all five are slightly angular.

The flowers, which bloom in May, are small, greenish, and produced, generally three or four together, in small bunches springing from the axils of the leaves. Stamens and pistils are never found in the same flower, nor are the flowers which have them individually ever met with on the same plant in this species, whence the name *dioica*, signifying literally 'two dwellings.' The male flowers are in loose, stalked bunches, 3 to 8 flowers in a bunch, or cyme, the stamens having one-celled, yellow anthers. The fertile flowers, easily distinguished from the barren by the presence of an ovary beneath the calyx, are generally either stalkless (sessile) or with very short stalks—two to five together. The corollas in each case consist of five petals, cohering only at the base.

The outer green calyx is widely bell-shaped and five-toothed.

The berries, which hang about the bushes after the stem and leaves are withered, are almost the size of peas when ripe, a pale scarlet in colour. They are filled with juice of an unpleasant, foetid odour and contain three to six large seeds, greyish-yellow, mottled with black, and are unwholesome to eat.

The whole plant is rather succulent, bright green and somewhat shining.

The name of the genus, *Bryonia*, derived from the Greek *bryo*, 1 shoot, or sprout appears to have reference to the vigorous an active growth of its annual stems, which proceed from the perennial roots, and so rapidly cover other shrubs, adhering to them with their tendrils. *Bryonia dioica* is the only British representative of the genus.

History

Under the name of Wild Nepit was known in the fourteenth century as an antidote to leprosy.

It produces a large, tuberous rootstock which is continuous with a thick, fleshy root which attains an enormous size. Gerard says of it:

'The Queen's chief surgeon, Mr. Wiiliam Godorous, a very curious and learned gentleman, shewed me a root hereof that waied half an hundredweight, and of the bignes of a child of a yeare old.'

This large, fleshy, pale-coloured root used often to be seen suspended in herb shops, occasionally trimmed into a rude human form. Green (*Universal Herbal*, 1832) tells us:

'The roots of Bryony grow to a vast size and have been formerly by imposters brought into a human shape, carried about the country and shown for Mandrakes to the common people. The method which these knaves practised was to open the earth round a young, thriving Bryony plant, being careful not to disturb the lower fibres of the root; to fix a mould, such as is used by those who make plaster figures, close to the root, and then to fill in the earth about the root, leaving it to grow to the shape of the mould, which is effected in one summer.'

The plant is still sometimes called Mandrake in Norfolk.

In this fleshy root is found a somewhat milky juice, very nauseous and bitter to the taste. It is of a violently purgative and cathartic nature, and was a favourite medicine with the older herbalists, well known to and much used by the Greeks and Romans prescribed by Galen and Dioscorides, and afterwards by Gerard, but is now seldom employed by regular practitioners, though sometimes by the homoeopathists, though they mostly use another variety of Bryony that is not indigenous to this country. The French call the root Navet du Diable (Devil's Turnip), from its violent and dangerous action.

Withering says a decoction made by boiling one pound of the fresh root in water is 'the best purge for horned cattle,' and it has been considered a sovereign remedy for horse grip.

Gerard declared the root to be profitable for tanners to thicken their hides with.

Bartholomew's Anglicus tells us that Augustus Caesar used to wear a wreath of Bryony during a thunderstorm to protect himself from lightning.

Culpeper says it is a 'furious martial plant,' but good for many complaints; among others, 'stiches in the side, palsies, cramps, convulsions' etc.

The acrid and cathartic properties of the root are shared in some measure by all parts of the plant: the berries are emetic and even poisonous. They have been used for dyeing. The young shoots in the spring are considered to be inert, and have sometimes been boiled and eaten as greens without harm resulting. Among animals, goats alone are said to eat this plant.

The extracts made from some exotic species of this tribe, as the Squirting Cucumber (Momordica elaterium) and the Colocynth (Cucumis colocynthis), afford useful medicine.

Part Used

The root is collected in the autumn and used both in the fresh and dry state. When fresh, it is of a dirty yellow or yellowish-white colour, externally marked at close intervals with prominent transverse corky ridges, which often extend half round the root and give it the appearance of being circularly wrinkled. Internally, it is whitish, succulent and fleshy, with a nauseous odour—which disappears in great measure on drying—and a bitter, acrid taste. The juice which exudes on cutting the root is milky, owing to the presence of numerous minute starch grains. The root is usually simple, like a carrot or parsnip, but sometimes is forked into two.

When sold dry, Bryony root appears in circular, brittle pieces, 1/4 to 1/3 inch thick about 2 inches in diameter, the thin bark greyish-brown and rough, longitudinally wrinkled, the central portion whitish or greyish, showing numerous round wood bundles arranged in concentric rays, with projecting radiating lines. The taste is disagreeably bitter, but there is no odour.

The large size, tapering shape, transverse corky ridges and nauseously bitter taste of Bryony root are distinctive. Small specimens may resemble Horseradish root, but that is cylindrical and smooth and has a pungent taste.

Medicinal Action and Uses

Irritative, hydragogue, cathartic. Its chief use was as a hydragogue cathartic, but is now superseded by Jalap. Its use as a purgative has been discontinued as dangerous, on account of its powerful and highly irritant nature.

It was formerly given in dropsy and other complaints. It is of so acrid a character that, if applied to the skin, it produces redness and even blisters. It has been used for cataplasms, and praised as a remedy for sciatica, rheumatism and lumbago.

It is still considered useful in small doses for cough, influenza, bronchitis and pneumonia, and has also been recommended for pleurisy and whooping-cough, relieving the pain and allaying the cough.

It has proved of value in cardiac disorders caused by rheumatism and gout, also in malarial and zymotic diseases.

In case of poisoning by Bryony, the stomach must be evacuated and demulcent drinks given. The body temperature must be maintained by the use of blankets and hot bottles.

C

CABBAGE TREE

Botanical: Andira inermis.

Family: N.O. Leguminosae.

Synonyms: Vouacapoua inermis. Bastard Cabbage Tree. Worm Bark. Yellow Cabbage Tree. Jamaica Cabbage Tree.

Part Used: Bark.

Habitat: Jamaica and other West Indian Islands. Senegambi.

Introduction

A leguminous tree, growing very tall and branching towards the top called Cabbage Tree because it forms a head in growing; it has a smooth grey bark which, cut into long pieces, is the part utilized for medicine.

It is thick, fibrous, scaly, and of an ashy brownish colour externally, covered with lichens—the inside bark is yellow and contains a bitter sweet mucilage, with an unpleasant smell. In Europe the bark of another species, Avouacouapa retusa, has been utilized.

It grows in Surinam, is a more powerful vermifuge than Vouacapoua inermus and does not as a rule produce such injurious after-effects. In the dried state it is without odour, but has a very bitter taste; when powdered it has the colour of cinnamon.

Constituents

Jamaicine-Andirin aglucoside, an inodorous, bitter, acrid resin.

Medicinal Action and Uses

Narcotic Vermifuge: Cabbage Tree bark used in large doses may cause vomiting, fever and delirium, especially if cold water is drunk just before or after taking it.

In the West Indies it is largely employed as a vermifuge to expel worm—ascaris lumbrecoides—but if used incautiously death has been known to occur. The powder purges like jalap.

Dosages

Usually given in decoction, though the powder, syrup and extract are all used. Dose of powder, 20 to 30 grains. Fluid extract, 1/4 to 1 drachm.

Antidote

Lime-juice or Castor oil.

Other Species

Andira retusa, a Brazilian species, has purple flowers, the odour of oranges and a slight aroma. The fruit is said to smell like tonka beans.

CALABAR BEAN

Botanical: Physostigma venenosum (EALF.).

Family: N.O. Leguminosae.

Synonyms: Ordeal Bean. Chop Nut.

Part Used: The seeds.

Habitat: West Africa, Old Calabar. Has been introduced into India and Brazil.

Introduction

The plant came into notice in 1846 and was planted in the Edinburgh Botanical Gardens, where it grew into a strong perennial creeper.

It is a great twining climber, pinnately trifoliate leaves, pendulous racemes of purplish bean-like flowers; seeds are two or three together in dark brown pods about 6 inches long and kidney-shaped thick, about 1 inch long, rounded ends, roughish but a little polished, and have a long scar on the edge where adherent to the placenta.

The seeds ripen at all seasons, but are best and most abundant during the rainy season in Africa, June till September. The natives of Africa employ the bean as an ordeal owing to its very poisonous qualities.

They call it esere, and it is given to an accused person to eat. If the prisoner vomits within half an hour he is accounted innocent, but if he succumbs he is found guilty. A draught of the pounded seeds infused in water is said to have been fatal to a man within an hour.

Constituents

The chief constituent is the alkaloid physostigmine (eserine), with which are calabarines, eseridine, and eseramine. Eseridine is not employed medicinally.

Medicinal Action and Uses

Chiefly used for diseases of the eye; it causes rapid contraction of the pupil and disturbed vision. Also used as a stimulant to the unstriped muscles of the intestines in chronic constipation. Its action on the circulation is to slow the pulse and raise blood-pressure; it depresses the central nervous system, causingmuscular weakness; it has been employed internally for its depressant action in epilepsy, cholera, etc., and given hypodermically in acute tetanus. Physostigmine Salicylas is preferred for the preparation of eyedrops.

Preparation of Doses

Extract of Calabar Bean, B.P.: dose, 1/4 to 1 grain. Extract of Physostigma, U.S.P.: dose, 1/8 grain. Tincture of Calabar Bean, B.P.C.: dose, 5 to 15 minims. Tincture of Physostigma, U.S.P.: dose, 15 minims. Physostigmine Eyedrops, B.P.C. Physostigmine eye ointment, B.P.C. Fluid extract, 1 to 3 drops.

Poisons and Antidotes

In case of poisoning by the beans the stomach should be evacuated and atropine injected until the pulse quickens. With poisoning by physostigmine the stomach should be washed out with 0.2 percent of potassium permanganate and atropine and strychnine administered hypodermically.

CALOTROPIS

Botanical: Calotropis procera (R.BR.) and gigantea.

Family: N.O. Asclepiadaceae.

Synonyms: Mudar Yercum.

Parts Used: Bark, root-bark.

Habitat: Native of Hindustan, but widely naturalized in the East and West Indies and Ceylon.

Introduction

The dried root freed from its outer cork layer and called Mudar. It occurs in commerce in short quilled pieces about 1/5 to 1/10 of an inch thick and not over 1 1/2 inch wide.

Deeply furrowed and reticulated, colour greyish buff, easily separated from periderm. Fracture short and mealy, taste bitter, nauseous, acrid; it has a peculiar smell and is mucilaginous; official in India and the Colonial addendum for the preparation of a tincture.

Constituents

A yellow bitter resin; a black acid resin; Madaralbum, a crystalline colourless substance; Madarfluavil, an ambercoloured viscid substance; and caoutchouc, and a peculiar principle which gelatinizes on being heated, called Mudarine. Lewin found a neutral principle, Calatropin, a very active poison of the digitalis type.

In India the author's husband experimented with it for paper-making, the inner bark yielding a fibre stronger than Russian hemp. The acrid juice hardens into a substance like gutta-percha. It has long been used in India for abortive and suicidal purposes. Mudar root-bark is very largely used there as a treatment for elephantiasis and leprosy, and is efficacious in cases of chronic eczema, also for diarrhoea and dysentery.

Preparations

Tincture of Calatropis, 1/2 to 1 fluid drachm. Powder, 3 to 12 grains.

Antidotes

As an antidote to poisoning atropine may be administered. In severe cases the stomach pump may be used and chloral or chloroform administered. Amyl nitrite may also be useful.

CHERRY LAUREL

Botanical: Prunus laurocerasus (LINN,).

Family: N.O. Rosaceae.

Part Used: The leaves.

Habitat: Asia Minor; cultivated in Europe.

Introduction

A small evergreen tree rising 15 to 20 feet, with long, spreading branches which, like the trunk, are covered with a smooth blackish bark. Leaves oval, oblong, petiolate, from 5 to 7 inches in length, acute, finely toothed, firm, coriaceous, smooth, beautifully green and shiny, with oblique nerves and yellowish glands at the base. Flowers small, white, strongly odorous, disposed in simple axillary racemes. Fruit an oval drupe, similar in shape and structure to a blackcherry, the odour of hydrocyanic acid may be detected in almost all parts of the tree and especially in the leaves when bruised.

Constituents

Prulaurasin (laurocerasin) is the chief constituent of the leaves. This has been obtained in long, slender, acicular, bitter crystals, closely resembling amygdalin, but not identical with it. The leaves yield an average of 0.1 percent of hydrocyanic acid, young leaves yielding more than the

Medicinal Action and Uses

Sedative, narcotic. The leaves possess qualities similar to those of hydrocyanic acid, and the water distilled from them is used for the same purpose as that medicine. Of value in coughs, whooping-cough, asthma, and in dyspepsia and indigestion.

Dosage

Cherry Laurel Water, B.P., 1/2 to 2 fluid drachms.

CICELY, SWEET

Botanical: Myrrhis odorata (SCOP.)

Family: N.O. Umbelliferae.

Synonyms: British Myrrh. Anise. Great (Sweet) Chervil. Sweet Chervil. Smooth Cicely. Sweet Bracken. Sweet-fern. Sweet-Cus. Sweet-Humlock. Sweets. The Roman Plant. Shepherd's Needle. Smoother Cicely. Cow Chervil.

Parts Used: The whole plant and seeds.

Habitat: Mountain pastures from the Pyrenees to the Caucasus. In Britain, in the hilly districts of Wales, northern England and Scotland.

Introduction

The name *Myrrhis odorata* is derived from the Greek word for perfume, because of its myrrh-like smell.

It is a native of Great Britain, a perennial with a thick root and very aromatic foliage, on account of which it was used in former days as a salad herb, or boiled, when the root, leaves, and seed were all used. The leaves are very large, somewhat downy beneath, and have a flavour rather like Anise, with a scent like Lovage.

The first shoots consist of an almost triangular, lacey leaf, with a simple wing curving up from each side of its root. The stem grows from 2 to 3 feet high, bearing many leaves, and white flowers in early summer appear in compound umbels. In appearance it is rather like Hemlock, but is of a fresher green colour. The fruit is remarkably large, an inch long, dark brown, and fully flavoured.

The leaves taste as if sugar had been sprinkled over them. It is probable that it is not truly a wild plant, as it is usually found near houses, where it may very probably be cultivated in the garden. Sweet Cicely is very attractive to bees; in the north of England it is said that the seeds are used to polish and scent oak floors and furniture. In Germany they are still very generally used in cookery.

The old herbalists describe the plant as 'so harmless you cannot use it amiss.' The roots were supposed to be not only excellent in a salad, but when boiled and eaten with oil and vinegar, to be 'very good for old people that are dull and without courage; it rejoiceth and comforteth the heart and increaseth their lust and strength.'

Medicinal Action and Uses

Aromatic, stomachic, carminative and expectorant. Useful in coughs and flatulence, and as a gentle stimulant for debilitated stomachs. The fresh root may be eaten freely or used in infusion with brandy or water.

A valuable tonic for girls from 15 to 18 years of age. The roots are antiseptic, and a decoction is used for the bites of vipers and mad dogs The distilled water is said to be diuretic, and helpful in pleurisy, and the essence to be aphrodisiac.

The decoction of roots in wine is also said to be effective for consumption, in morning and evening doses of 4 to 8 OZ., while the balsam and ointment cure green wounds, stinking ulcers, and ease the pain of gout.

The medicinal properties resemble those of the American variety.

Chervil, or *Scandix Cerefolium* (fam. Umbelliferae), a native of southern Europe and the Levant, is used only in cookery, and used in the French bouquet of herbs known as 'fines herbes.'

American Sweet Cicely (fam. Apicceae) or *Ozmorrhiza longistylis*. This plant grows in various parts of the United States, on lowlying, moist lands, flowering in May and June. The root has a sweet smell and taste, resembling aniseed and yields its properties to water or diluted alcohol.

CLEMATIS

Botanical: Clematis recta.

Family: N.O. Ranunculaceae.

Synonyms: Upright Virgin's Bower. Flammula Jovis.

Parts Used: The roots, stems.

Habitat: Europe.

Introduction

A perennial plant, stem about 3 feet high, leafy, striated, herbaceous, greenish or reddish; leaves large opposite, leaflets five to nine pubescent underneath, petioled; flowers, white in upright stiff terminal umbels, peduncles several times ternate; seeds dark brown, smooth, orbicular, much compressed, tails long yellowish, plumose; time for collecting when beginning to flower. The leaves and flowers have an acrid burning taste, the acridity being greatly diminished by drying.

Medicinal Action and Uses

The leaves and flowers when bruised irritate the eyes and throat giving rise to a flow of tears and coughing; applied to the skin they produce inflammation and vesication, hence the name Flammula Jovis. They are diuretic and diaphoretic, and are useful locally and internally in syphilitic, cancerous and other foul ulcers. Best suited to fair people, much used by homoeopathists for eye affections, gonorrhoeal symptoms and inflammatory conditions.

Dosages

1 to 2 grains of the extract a day. 30 to 40 grains of the leaves in infusion a day.

Other Species

Clematis flammula (Sweet-scented Virgin's Bower) is cultivated in gardens, together with C. Vitalba (Travellers' Joy) and C. Virginia (Common Virgin's Bower). C. Viorna (Leather Flower) and C. crispa has been sometimes used in place of C. recta. C. flammula is said to contain an alkaloid, Clematine, a violent poison. From the bruised roots and stems of C. vitalba, boiled for a few minutes in water and then digested for a while in sweet oil, a preparation is made used as a cure for itch, this variety is also said to contain Clematine.

COCA, BOLIVIAN

Botanical: Erythroxylon Coca (LAMK.)

Family: N.O. Linaceae.

Synonyms: Cuca. Cocaine.

Part Used: Leaves.

Habitat: Bolivia and Peru; cultivated in Ceylon and Java.

Introduction

Small shrubby tree 12 to 18 feet high in the wild state and kept down to about 6 feet when cultivated. Grown from seeds and requires moisture and an equable temperature. Starts yielding in eighteen months and often productive over fifty years. The leaves are gathered three times a year, the first crop in spring, second in June, and third in October; must always be collected in dry weather. There are two varieties in commerce, *the Huanuco Coca, or Erythroxylon Coca*, which comes from Bolivia and has leaves of a brownish-green colour, oval, entire and glabrous, with a rather bitter taste, and Peruvian Coca, the leaves of which are much smaller and a pale-green colour. *Coca* leaves deteriorate very quickly in a damp atmosphere, and for this reason the alkaloid is extracted from the leaves in South America before *exportation*. The Coca shrubs of India and Ceylon were originally cultivated from plants sent out there from Kew Gardens and grown from seeds.

Constituents

Coca leaves contain the alkaloids Cocaine, Annamyl Cocaine, andTruxilline or Cocamine. As a rule the Truxillo or Peruvian leaves contain more alkaloid than the Bolivian, though the latter are preferred for medicinal purposes. Java Coca contains tropacocaine and four yellow crystalline glucosides in addition to the other constituents.

Medicinal Action and Uses

The actions of Coca depend principally on the alkaloid Cocaine, but the whole drug is said to be more stimulating and to have a mild astringency. In Peru and Bolivia the leaves are extensively chewed to relieve hunger and fatigue, though the habit eventually ruins the health. Coca leaves are used as a cerebral and muscle stimulant, especially during convalescence, to relieve nausea, vomiting and pains of the stomach without upsetting the digestion. A tonic in neurasthenia and debilitated conditions. The danger of the formation of the habit, however, far outweighs any value the drug may possess, and use of Coca in any form is attended with grave risks. Cocaine is a general protoplasmic poison, having a special affinity for nervous tissue; it is a powerful local anaesthetic, paralysing the sensory nerve fibres.

To obtain local cutaneous anaesthesia the drug is injected hypodermically. Applied to the eye it dilates the pupil and produces complete local anaesthesia. It is a general excitant of the central nervous system and the brain, especially the motor areas producing a sense of exhilaration and an incitement to effort; large doses cause hallucinations, restlessness, tremors and convulsions. Those acquiring the Cocaine habit suffer from emaciation, loss of memory, sleeplessness and delusions.

Preparations and Dosages

Elixir Coca, B.P.C., 1 to 4 fluid drachms. Extract of Coca, B.P.C., 2 to 10 grains. Liquid extract of Coca, B.P., 1/2 to 1 fluid drachm. Fluid extract of Coca, U.S.P., 30 minims. Tincture of Coca, B.P.C., 1/2 to 1 fluid drachm. Coca Wine, B.P.C., 2 to 4 fluid drachms. Wine of Coca,, U.S.P., 4 fluid drachms. Cocaine, P.B., 1/20 to 1/2 grain.

Adulterants

Coca leaves have sometimes been adulterated with those of Jaborandi.

Poisoning Antidotes

Cocaine rarely enters the system through the alimentary canal, therefore the use of a stomach pump, emetics or chemical antidotes is not usual; strong coffee should be given as a stimulant by mouth or rectum and measures taken to prevent cardiac failure.

COCCULUS, INDICUS

Botanical: Anamirta paniculata (COLEBR.)

Family: N.O. Menispermaceae.

Synonyms: Levant Nut. Fish Berry.

Part Used: Dried fruit.

Habitat: India, Ceylon, Malabar.

Introduction

A poisonous climbing plant with ash-coloured corky bark, leaves stalked, heart-shaped, smooth, underside pale with tufts of hair at the junctions of the nerves and at the base of the leaves, the flowers are pendulous panicles, male and female blooms on different plants; fruit round and kidney shaped, outer coat thin, dry, browny, black and wrinkled, inside a hard white shell divided into two containing a whitish seed, crescent shaped and very oily.

Constituents

The chief constituent is the bitter, crystalline, poisonous substance, picrotoxin; the seed also contains about 50 percent.

Medicinal Action and Uses

The powdered berries are sometimes used as an ointment for destroying lice; the entire fruits are used to stupefy fish, being thrown on the water for that purpose. Picrotoxin is a powerful convulsive poison used principally to check night sweats in phthisis by its action in accelerating respiration, but it is not always successful. It was at one time used to adulterate beers, increasing their reputation as intoxicants; it is an antidote in Morphine poisoning.

Preparations

Fluid extract, 1/4 to 1 drop. Picrotoxin, B.P.

COHOSH, BLACK

Botanical: Cimicifuga racemosa (NUTT.)

Family: N.O. Ranunculaceae.

Synonyms: Black Snake Root. Rattle Root. Squaw Root, Bugbane.

Part Used: Root.

Habitat: A native of North America, where it grows freely in shady woods in Canada and the United States. It is called Black Snake Root to distinguish it from the Common Snake Root (Aristolochia serpentaria).

Introduction

The seeds are sent annually to Europe, and should be sown as soon as the season will permit. It flowers in June or early in July, but does not perfect seed in England, though it thrives well in moist shady borders and is perfectly hardy.

It is a tall, herbaceous plant, with feathery racemes of white blossoms, 1 to 3 feet long, which being slender, droop gracefully. The fruits are dry.

The plant produces a stout, blackish rhizome (creeping underground stem), cylindrical, hard and knotty, bearing the remains of numerous stout ascending branches.

It is collected in the autumn after the fruit is formed and the leaves have died down, then cut into pieces and dried. It has only a faint, disagreeable odour, but a bitter and acrid taste.

The straight, stout, dark brown roots which are given off from the under surface of the rhizome are bluntly quadrangular and furrowed. In the dried drug, they are brittle, broken off usually quite close to the rhizome. In transverse section, they show several wedge-shaped bundles of porous, whitish wood. A similar section of the rhizome shows a large dark-coloured, horny pith, surrounded by a ring of numerous pale wedges of wood, alternately with dark rays, outside which is a thin, dark, horny bark.

Constituents

The chief constituent of Cimicifuga root is the amorphous resinous substance known as Cimicifugin, or Macrotin, of which it contains about 18 percent but the bitter taste is due to a crystalline principle named Racemosin. The drug also contains two resins, together with fat, wax starch, gum, sugar and an astringent substance.

Medicinal Action and Uses

Astringent, emmenagogue, diuretic, alterative, expectorant. The root of this plant is much used in America in many disorders, and is supposed to be an antidote against poison and the bite of the rattlesnake. The fresh root, dug in October, is used to make a tincture. In small doses, it is useful in children's diarrhoea.

In the paroxyms of consumption, it gives relief by allaying the cough, reducing the rapidity of the pulse and inducing perspiration. In whooping-cough, it proves very effective.

The infusion and decoction have been given with success in rheumatism.

In infantile disorders, it is given in the form of syrup. It is said to be a specific in St. Vitus' Dance of children. Overdoses produce nausea and vomiting.

Preparations

Fluid extract, U.S.P., 15 to 30 drops. Fluid extract, B.P., 5 to 30 drops. Tincture, U.S.P., 1 drachm. Tincture, B.P., 15 to 60 drops. Cimicifugin, 1 to 6 grains. Powdered extract, U.S.P., 4 grains.

CUCKOO-PINT

Botanical: Arum maculatum.

Family: N.O. Araceae.

Synonyms: Lords and Ladies. Arum. Starchwort. Adder's Root. Bobbins. Friar's Cowl. Kings and Queens. Parson and Clerk. Ramp. Quaker. Wake Robin.

Part Used: Root.

The Arum family, *Aroidae*, which numbers nearly 1,000 members, mostly tropical, and many of them marsh or water plants, is represented in this country by a sole species, *Arum maculatum* (Linn.), familiarly known as Lords and Ladies, or Cuckoo-pint.

Introduction

The flowering organs are contained in a sheath-like leaf called a spathe, within which rises a long, fleshy stem, or column called the spadix, bearing closely arranged groups of stalkless, primitive flowers. At the base are a number of flowers each consisting of a pistil only.

Above these is a belt of sterile flowers, each consisting of only a purplish anther. Above the anther is a ring of glands, terminating in short threads The spadix is then prolonged into a purple; club-like extremity. The bright leaves, conspicuous by their glossiness and purple blotches, and their halberd-like shape, are some of the first to emerge from the ground on the approach of spring, and may then be noticed under almost every hedge in shady situations; the pale green spathe is a still more striking object when it appears in April and May.

In autumn, the lowest ring of flowers form a cluster of bright scarlet, attractive berries, which remain long after the leaves have withered away, and on their short, thick stem alone mark the situation of the plant. In pite of their very acrid taste, they have sometimes been eaten by children, with most injurious results, being extremely poisonous. One drop of their juice will cause a burning sensation in the mouth and throat for hours. In the case of little children who have died from eating the berries, cramp and convulsions preceded death if no medical aid had been obtained.

The Arum has large tuberous roots, somewhat resembling those of the Potato, oblong in shape, about the size of a pigeon's egg, brownish externally, white within and when fresh, fleshy yielding a milky juice, almost insipid to the taste at first, but soon producing a burning and pricking sensation. The acridity is lost during the process of drying and by application of heat, when the substance of the tuber is left as starch.

When baked, the tubers are edible, and from the amount of starch, nutritious. This starch of the root, after repeated washing, makes a kind of arrowroot, formerly much prepared in the Isle of Portland, and sold as an article of food under the name of Portland Sago, or

Portland Arrowroot, but now obsolete. For this purpose, it was either roasted or boiled, and then dried and pounded in a mortar, the skin being previously peeled.

Arum starch was used for stiffening ruffs in Elizabethan times, when we find the name Starchwort among the many names given to the plant. Gerard says: 'The most pure and white starch is made of the rootes of the Cuckoo-pint, but most hurtful for the hands of the laundresse that have the handling of it, for it chappeth, blistereth, and maketh the hands rough and rugged and withall smarting.'

This starch, however, in spite of Gerard's remarks, forms the Cyprus Powder of the Parisians, who used it as a cosmetic for the skin, and Dr. Withering says of this cosmetic formed from the tuber starch, that 'it is undoubtedly a good and innocent cosmetic'; and Hogg (*Vegetable Kingdom*, 1858) reported its use in Italy to remove freckles from the face and hands.

In parts of France, a custom existed of turning to account the mucilaginous juice of the plant as a substitute for soap, the stalks of the plant when in flower being cut and soaked for three weeks in water, which was daily poured off carefully and the residue collected at the bottom of the pan, then dried and used for laundry work. Withering quotes Wedelius for the supposition that it was this plant, under the name of Chara, on which the soldiers of Caesar's army subsisted when encamped at Dyrrhachium.

A curious belief is recorded by Gerard as coming from Aristotle, that when bears were half-starved with hibernating and had lain in their dens forty days without any nourishment, but such as they get by 'sucking their paws,' they were completely restored by eating this plant. The roots, according to Gilbert White, are scratched up and eaten by thrushes in severe snowy seasons, and the berries are devoured by several kinds of birds, particularly by pheasants. Pigs which have eaten the fresh tubers suffered, but none died, though it acts as an irritant and purgative. As the leaves when bruised give out a disagreeable odour, they are not spontaneously eaten by animals, who quickly refuse them.

Constituents

The fresh tuber contains a volatile, acrid principle and starch, albumen, gum, sugar, extractive, lignin and salts of potassium and calcium. Saponin has been separated, also a brownish, oily liquid alkaloid, resembling coniine in its properties, but less active.

Arum leaves give off prussic acid when injured, being a product of certain glucosides contained, called cyanophoric glucosides.

Collection and Uses

The tubers for medicinal use should be dug up in autumn, or in early spring, before the leaves are fully developed. If laid in sand in a cellar, they can be preserved in sound condition for nearly a year. When not needed for use in the fresh state, they can be dried slowly in very gentle heat and sliced. The dried slices are reduced to powder and kept in the cool, in stoppered bottles.

The fresh root when beaten up with gum, is recommended as a good pill mass, retaining all the medicinal properties. The Arum had formerly a great reputation as a drug, in common with all other plants containing acrid or poisonous principles. The dried root was recommended as a diuretic and stimulant, but is no longer employed. *The British Domestic Herbal* describes a case of alarming dropsy with great constitutional exhaustion treated most successfully with a medicine composed of Arum and Angelica, which cured in about three weeks. The juice of the fresh tuber is purgative, but too violently so to be safely administered, and its use for this purpose has now been abandoned.

Other uses of the tuber are, however, advocated in herbal medicine. Preparations were once official in the Dublin Pharmacopceia, and are also recommended by Homoeopathy. A homoeopathic tincture is prepared from the plant, and its root, which proves curative in diluted doses for a chronic sore throat with swollen mucous membranes and hoarseness, and likewise for a feverish sore throat. An ointment made by stewing the fresh sliced tuber with lard is stated to be an efficient cure for ringworm, though the fresh sliced tuber applied to the skin produces a blister. The juice of the fresh plant when incorporated with lard has also been applied locally in the treatment of ringworm.

CUCUMBER, SQUIRTING

Botanical: Ecballium elaterium.

Family: N.O. Cucurbitaceae.

Synonyms: Momordica Elaterium. Wild Cucumber.

Habitat: Europe, cultivated in Britain.

Introduction

A perennial plant but in Britain an annual, with a large fleshy root from which rise several round, thick stems, branching and trailing like the Common Cucumber but without tendrils; leaves heartshaped, rough; flower-stalks auxillary; male flowers in clusters with bell-shaped, yellow green veined corollas, females solitary; fruit a small elliptical greenish gourd covered with soft triangular prickles. The fruits forcibly eject their seeds together with a mucilaginous juice, a phenomenon due to endormosis. The plant flowers in July. The fruit is collected just before it ripens and is left until it matures and ejects the seeds and juice; this must not be artificially hastened or the product will be injured; the juice is then dried in flakes and sent to the market as Elaterium. The flakes often bear the impress of the muslin on which they were dried.

Constituents

Elaterin; a green resin, starch, lignin, and saline matter.

Medicinal Action and Uses

A powerful hydragogue cathartic, and in large doses excites nausea and vomiting. If administered too frequently it operates with great violence on both the stomach and bowels producing inflammation and possibly fatal results.

It also increases the flow of urine, and is of some use in the treatment of dropsy, especially when oedema is due to disease of the kidney. There is a case on record of a French doctor who suffered severely from carrying some of the seeds in his hat from the Jardin des Plante to his Paris lodging.

Preparations and Dosages

It must be used with the greatest caution; because of its variability Elaterium should not be employed, preference always being given to the official Elaterin. 'Elaterium, 1/10 to 1/2 grain. Elacterin, 1/40 to 1/10 grain. Compound powder of Elacterin = Elaterin in fine powder, 1 part milk, sugar in fine powder 39 parts; dose, 1 to 4 grains.

Poisons and Antidotes

As for Bitter Apple.

D

DROPWORT, HEMLOCK WATER

Botanical: Oenanthe crocata (LINN.)

Family: N.O. Umbelliferae.

Synonyms: Horsebane. Dead Tongue. Five-Fingered Root. Water Lovage. Yellow Water Dropwort.

Part Used: Root.

The name Water Hemlock is, though incorrectly, often popularly applied to several species of *Oenanthe*, the genus of the Water Dropworts, which of all the British umbelliferous plants are the most poisonous.

The species most commonly termed Water Hemlock is *Oenanthe crocata*, the Hemlock Water Dropwort, a common plant in England, especially in the southern counties, in ditches and watering places, but not occurring in Scandinavia, Holland, Germany, Russia, Turkey or Greece.

Introduction

It is a large, stout plant, 3 to 5 feet high, the stems thick, erect, much branched above, furrowed, hollow, tough, dark green and smooth.

The roots are perennial and fleshy, of a pale yellow colour. They have a sweetish and not unpleasant taste, but are virulently poisonous. Being often exposed by the action of running water near which they grow, they are thus easily accessible to children and cattle, and the plant should not be allowed to grow in places where cattle are kept, as instances are numerous in which cows have been poisoned by eating these roots.

They have also occasionally been eaten in mistake, either for wild celery or water parsnip, with very serious results, great agony, sickness, convulsions, or even death resulting. While the root of the Parsnip is single and conical in form, that of *Oenanthe crocata* consists of clusters of fleshy tubers similar to those of the Dahlia, hence, perhaps, one of its popular names: Dead Tongue.

The author of *Familiar Wild* Flowers states that the name 'Dead Tongue' was given from the paralysing effect of this plant on the organs of speech.

No British wild plant has been responsible for more fatal accidents than the one in question: a party of workmen repairing a breach in a towing-path dug up the plants and ate the roots, mistaking them for parsnips; another party, working in a field, thought that a few of the leaves with their bread and cheese would prove a tasty relish: in each case death occurred within three hours. On another occasion eight boys ate the roots, and five died—and the other three had violent convulsions and lost their reason for many hours.

The plant has been used to poison rats and moles.

Both stem and root, when cut, exude a yellowish juice, hence the specific name of the plant and one of the common names (Yellow Water Dropwort) by which it is known. The juice will stain the hands yellow. The generic name, *Oenanthe*, is derived from the *Greek* ainos (wine) and anthos (a flower), from the wine-like scent of the flowers.

The leaves are somewhat celery-like in form, and the flowers are in bloom in June and July, and are borne in large umbels. There is considerable variety in the form of the leaf segments, the number of rays in the umbel, and of the involucre bracts. The lower leaves, with very short, sheathing footstalks, are large and spreading, reaching more than a foot in length, broadly triangular in outline and tripinnate.

The leaflets are stalkless, 1 to 1 1/2 inch long, roundish, with a wedge-shaped base, deeply and irregularly lobed, dark green, paler and shining beneath. The upper leaves are much smaller, nearly stalkless, the segments narrower and acute.

This most poisonous of our indigenous plants is not official and has never been used to any extent in medicine, though in some cases it has been taken with effect in eruptive diseases of the skin, being given at first in small doses, gradually increased.

Great caution must be exercised in the use of the tincture. The dose of the tincture is 1 to 5 drops. The roots have likewise been used in poultices to whitlows and to foul ulcers, both in man and horned cattle.

DROPWORT, WATER

Botanical: Oenanthe phellandrium (LANK.)

Family: N.O. Umbelliferae.

Synonyms: Water Fennel. Horsebane. Phellandrium aquaticum (Linn.).

Part Used: Fruit.

Oenanthe phellandrium (syn. Phellandrium aquaticum), the Fine-leaved Water Dropwort, known popularly as Water Fennel, is a common British plant in ditches and by the sides of ponds.

It is a biennial, flowering from July to September in its second year of growth.

Introduction

The stems are 2 to 3 feet high, very stout at the base, rising from fibrous roots. The leaves are divided into many fine segments, the lower ones submerged. The umbels are smaller than those of O. crocata and are on short stalks, springing either from the forks of the branches or from opposite the leaves.

The rootstock varies in appearance, according to the locality. If growing in deep or running water the rootstock and stem are long and slender; in other districts it is thicker and more erect. The variety that grows in deep running water is often considered a distinct species and is classed under O. fluviatilis.

O. phellandrium is less poisonous than O. crocata, but both produce ill-effects if eaten.

Constituents

The fruits yield from 1 to 2 1/2 percent of an ethereal oil, known as Water Fennel Oil, a yellow liquid of strong, pleasant, characteristic odour and burning taste, its specific gravity 0.85 to 0.89, containing as its chief constituent about 80 percent of the terpene Phellandrene.

Medicinal Action and Uses

The fruits have been used in chronic pectoral affections such as bronchitis, pulmonary consumption and asthma, also in dyspepsia, intermittent fever, obstinate ulcers, etc. The dose when given in powdered form is 5 or 6 grains to commence with, so repeated as to amount to a drachm in four hours. An alcoholic extract and essence of the fruits has also been recommended as a very valuable and active remedy in the relief of consumption and bronchitis.

In overdoses the fruits produce vertigo, intoxication and other narcotic effects. Externally applied, the root has sometimes been used as a local remedy in piles. When eaten in mistake, like that of O. crocata, the results have sometimes proved fatal. The symptoms produced are those of irritation of the stomach, failure of circulation and great cerebral disturbance, indicated by giddiness, convulsions and coma.

The fresh leaves are injurious to cattle, producing a kind of paralysis when eaten. When dried, they lose their deleterious properties.

O. Fistulosa, the Common Water Dropwort, is found in watery places. This has a mixture of slender and fleshy roots, and bears leaves with only a few narrow segments. It is also poisonous. A peculiar resinous principle, called cenanthin, has been found in this species.

Most of the other species of *Oenanthe* found both in Great Britain and in the United States are poisonous, although none appear to be as virulent as *O. crocata*.

A few are, however, innocuous, and their roots, especially those of *O. pimpinelloides*, have been esteemed as food in certain districts. Burnett (*Medical Botany*) states 'they are replete with a bland farina and have something the flavour of a filbert.'

F

FOXGLOVE

Botanical: Digitalis purpurea (LINN.)

Family: N.O. Scrophulariaceae.

Synonyms: Witches' Gloves. Dead Men's Bells. Fairy's Glove. Gloves of Our Lady. Bloody Fingers. Virgin's Glove. Fairy Caps. Folk's Glove. Fairy Thimbles.

(Norwegian) Revbielde.

(German) Fingerhut.

Part Used: Leaves.

Habitat: The Common Foxglove of the woods (*Digitalis purpurea*), perhaps the handsomest of our indigenous plants, is widely distributed throughout Europe and is common as a wild-flower in Great Britain, growing freely in woods and lanes, particularly in South Devon, ranging from Cornwall and Kent to Orkney, but not occurring in Shetland, or in some of the eastern counties of England.

It flourishes best in siliceous soil and grows well in loam, but is entirely absent from some calcareous districts, such as the chain of the Jura, and is also not found in the Swiss Alps. It occurs in Madeira and the Azores, but is, perhaps, introduced there. The genus contains only this one indigenous species, though several are found on the Continent. Needing little soil, it is found often in the crevices of granite walls, as well as in dry hilly pastures, rocky places and by roadsides. Seedling Foxgloves spring up rapidly from recently-turned earth. Turner (1548), says that it grows round rabbitholes freely.

Introduction

The normal life of a Foxglove plant is two seasons, but sometimes the roots, which are formed of numerous, long, thick fibres, persist and throw up flowers for several seasons.

In the first year a rosette of leaves, but no stem, is sent up. In the second year, one or more flowering stems are thrown up, which are from 3 to 4 feet high, though even sometimes more, and bear long spikes of drooping flowers, which bloom in the early summer, though the time of flowering differs much, according to the locality. As a rule the flowers are in perfection in July.

As the blossoms on the main stem gradually fall away, smaller lateral shoots are often thrown out from its lower parts, which remain in flower after the principal stem has shed its blossoms. These are also promptly developed if by mischance the central stem sustains any serious injury.

The radical leaves are often a foot or more long, contracted at the base into a long, winged footstalk, the wings formed by the lower veins running down into it some distance. They have slightly indented margins and sloping lateral veins, which are a very prominent feature. The flowering stems give off a few leaves, that gradually diminish in size from below upwards. All the leaves are covered with small, simple, unbranched hairs.

The flowers are bell-shaped and tubular, 1 1/2 to 2 1/2 inches long, flattened above, inflated beneath, crimson outside above and paler beneath, the lower lip furnished with long hairs inside and marked with numerous dark crimson spots, each surrounded with a white border. The shade of the flowers varies much, especially under cultivation, sometimes the corollas being found perfectly white.

In cultivated plants there frequently occurs a malformation, whereby one or two of the uppermost flowers become united, and form an erect, regular, cup-shaped flower, through the centre of which the upper extremity of the stem is more or less prolonged.

The Foxglove is a favourite flower of the honey-bee, and is entirely developed by the visits of this insect. For that reason, its tall and stately spikes of flowers are at their best in those sunny, midsummer days when the bees are busiest.

The projecting lower lip of the corolla forms an alighting platform for the bee, and as he pushes his way up the bell, to get at the honey which lies in a ring round the seed vessel at the top of the flower, the anthers of the stamens which lie flat on the corolla above him, are rubbed against his back.

Going from flower to flower up the spike, he rubs pollen thus from one blossom on to the cleft stigma of another blossom, and thus the flower is fertilized and seeds are able to be produced.

The life of each flower, from the time the bud opens till the time it slips off its corolla, is about six days. An almost incredible number of seeds are produced, a single Foxglove plant providing from one to two million seeds to ensure its propagation.

It is noteworthy that although the flower is such a favourite with bees and is much visited by other smaller insects, who may be seen taking refuge from cold and wet in its drooping blossoms on chilly evenings, yet no animals will browse upon the plant, perhaps instinctively recognizing its poisonous character

The Foxglove derives its common name from the shape of the flowers resembling the finger of a glove. It was originally Folksglove—the glove of the 'good folk' or fairies, whose favourite haunts were supposed to be in the deep hollows and woody dells, where the Foxglove delights to grow. Folksglove is one of its oldest names, and is mentioned in a list of plants in the time of Edward III. Its Norwegian name, Revbielde (Foxbell), is the only foreign one that alludes to the Fox, though there is a northern legend that bad fairies gave these blossoms to the fox that he might put them on his toes to soften his tread when he prowled among the roosts.

The earliest known form of the word is the Anglo-Saxon *foxes glofa* (the glove of the fox).

The mottlings of the blossoms of the Foxglove and the Cowslip, like the spots on butterfly wings and on the tails of peacocks and pheasants, were said to mark where the elves had placed their fingers, and one legend ran that the marks on the Foxglove were a warning sign of the baneful juices secreted by the plant, which in Ireland gain it the popular name of 'Dead Man's Thimbles.' In Scotland, it forms the badge of the Farquharsons, as the Thistle does of the Stuarts. The German name *Fingerhut* (thimble) suggested to Leonhard Fuchs (the well-known German herbalist of the sixteenth century, after whom the Fuchsia has been named) the employment of the Latin adjective *Digitalis* (from *Digitabulum*, a thimble) as a designation for the plant, which, as he remarked, up to the time when he thus named it, in 1542, had had no name in either Greek or Latin.

The Foxglove was employed by the old herbalists for various purposes in medicine, most of them wholly without reference to those valuable properties which render it useful as a remedy in the hands of modern physicians. Gerard recommends it to those 'who have fallen from high places,' and Parkinson speaks highly of the bruised herb or of its expressed juice for scrofulous swellings, when applied outwardly in the form of an ointment, and the bruised leaves for cleansing for old sores and ulcers. Dodoens (1554) prescribed it boiled in wine as an expectorant, and it seems to have been in frequent use in cases in which the practitioners of the present day would consider it highly dangerous. Culpeper says it is of: 'a gentle, cleansing nature and withal very friendly to nature.

The Herb is familiarly and frequently used by the Italians to heal any fresh or green wound, the leaves being but bruised and bound thereon and the juice thereof is also used in old sores, to cleanse, dry and heal them. It has been found by experience to be available for the King's evil, the herb bruised and applied, or an ointment made with the juice thereof, and so used . . . I am confident that an ointment of it is one of the best remedies for a scabby head that is.' Strangely enough, the Foxglove, so handsome and striking in our landscape, is not mentioned by Shakespeare, or by any of the old English poets. The earliest known Introductions of it are those given about the middle of the sixteenth century by Fuchs and Tragus in their Herbals. According to an old manuscript, the Welsh physicians of the thirteenth century appear to have frequently made use of it in the preparation of external medicines. Gerard and Parkinson advocate its use for a number of complaints, and later Salmon, in the *New London Dispensatory*, praised the plant.

It was introduced into the London Pharmacopoeia in 1650, though it did not come into frequent use until a century later, and was first brought prominently under the notice of the medical profession by Dr. W. Withering, who in his *Acount of the Foxglove*, 1785, gave details of upwards of 200 cases, chiefly dropsical, in which it was used.

A domestic use of the Foxglove was general throughout North Wales at one time, when the leaves were used to darken the lines engraved on the stone floors which were fashionable then. This gave them a mosaic like appearance. The plant is both cultivated and collected in quantities for commercial purposes in the Harz Mountains and the Thuringian Forest.

Cultivation

The Foxglove is cultivated by a few growers in this country in order to provide a drug of uniform activity from a true type of *Digitalis purpurea*. It is absolutely necessary to have the true medicinal seeds to supply the drug market: crops must be obtained from carefully selected wild seed and all variations from the new type struck out.

The plant will flourish best in well drained loose soil, preferably of siliceous origin, with some slight shade. The plants growing in sunny situations possess the active qualities of the herb in a much greater degree than those shaded by trees, and it has been proved that those grown on a hot, sunny bank, protected by a wood, give the best results.

It grows best when allowed to seed itself, but if it is desired to raise it by sown seed, 2 lb. of seed to the acre are required. As the seeds are so small and light, they should be mixed with fine sand in order to ensure even distribution. They should be thinly covered with soil. The seeds are uncertain in germination, but the seedlings may be readily and safely transplanted in damp weather, and should be pricked out to 6 to 9 inches apart. Sown in spring, the plant will not blossom till the following year. Seeds must be gathered as soon as ripe. The flowers of the true medicinal type must be pure, dull pink or magenta, not pale-coloured, white or spotted externally.

It is estimated that one acre of good soil will grow at least two tons of the Foxglove foliage, producing about 1/2 ton of the dried leaves.

Preparation for Market

The leaves alone are now used for the extraction of the drug, although formerly the seeds were also official.

No leaves are to be used for medicinal purposes that are not taken from the two year-old plants, picked when the bloom spike has run up and about two-thirds of the flowers are expanded, because at this time, before the ripening of the seeds, the leaves are in the most active state. They may be collected as long as they are in good condition: only green, perfect leaves being picked, all those that are insect-eaten or diseased, or tinged with purple or otherwise discoloured, must be discarded. Leaves from seedlings are valueless, and they must also not be collected in the spring, before the plant flowers, or in the autumn, when it has seeded, as the activity of the alkaloids is in each case too low.

If the *fresh* leaves are sent to the manufacturing druggists for Extract-making, they should be in 1/2 cwt. bundles, packed in air covered railway cattle-trucks, or if in an open truck, must be covered with tarpaulin. The fresh crop should, if possible, be delivered to the wholesale buyer the same day as cut, but if this is impossible, on account of distance, they should be picked before the dew falls in the late afternoon and despatched the same evening, packed loosely in wicker baskets, lined with an open kind of muslin. Consignments by rail should be labelled: 'Urgent, Medicinal Herbs,' to ensure quick delivery. The weather for picking must be absolutely dry—no damp or rain in the air and the leaves must be kept out of the sun and not packed too closely, or they may heat and turn yellow.

The odour of the fresh leaves is unpleasant, and the taste of both fresh and dried leaves is disagreeably bitter.

Foxglove leaves have in some places been recklessly gathered by over-zealous and thoughtless collectors without due regard to the future supply of the plants. The plant should not be roughly treated and never cut off just above the root, but the bottom leaves should in all cases be left to nourish the flower-spikes, in order that the seed may be ripened. In patches where Foxgloves grow thickly, the collection and redistribution of seed in likely places is much to be recommended. The dried leaves as imported have occasionally been found adulterated with the leaves of various other plants.

The chief of these are *Inula Conyza* (Ploughman's Spikenard), which may be distinguished by their greater roughness, the less-divided margins, the teeth of which have horny points, and odour when rubbed; *I. Helenium* (Elecampane), the leaves of which resemble Foxglove leaves, though they are less pointed, and the lower lateral veins do not form a 'wing' as in the Foxglove, the leaves of *Symphytum officinale* (Comfrey), which, however, may be recognized by the isolated stiff hairs they bear, and Verbascum Thapsus (Great Mullein), the leaves of which, unlike those of the Foxglove, have woolly upper and under surfaces, and the hairs of which, examined under a lens, are seen to be branched. Primrose leaves are also sometimes mingled with the drug, though they are much smaller than the average Foxglove leaf, and may be readily distinguished by the straight, lateral veins, which divide near the margins of the leaves. Foxglove leaves are easy to distinguish by their veins running down the leaf.

There is no reason why Foxglove leaves, properly prepared, should not become a national export. Digitalis has lately been grown in Government Cinchona plantations in the Nilgiris, Madras, India. The leaves are coarser and rather darker in colour than British or German-grown leaves, wild or cultivated, but tests show that the tincture prepared from them contains glucosides of more than average value.

Constituents

Digitalis contains four important glucosides of which three arecardiac stimulants. The most powerful is Digitoxin, an extremely poisonous and cumulative drug, insoluble in water, Digitalin, which is crystalline and also insoluble in water; Digitalein, amorphous, but readily soluble in water, rendering it, therefore, capable of being administered subcutaneously, in doses so minute as rarely to exceed of a grain; Digitonin, which is a cardiac depressant, containing none of the physiological action peculiar to Digitalis, and is identical with Saponin, the chief constituent of Senega root. Other constituents are volatile oil, fatty matter, starch, gum, sugar, etc.

The amount and character of the active constituents vary according to season and soil: 100 parts of dried leaves yield about 1.25 of Digitalin, which is generally found in a larger proportion in the wild than in the cultivated plants.

The active constituents of Digitalis are not yet sufficiently explored to render a chemical assay effective in standardizing for therapeutic activity. The different glucosides contained varying from each other in their physiological action, it is impossible to assay the leaves by determining one only of these, such as Digitoxin. No method of determining Digitalin is known. Hence the chemical means of assay fail, and the drug is usually standardized by a physiological test. One of our oldest firms of manufacturing druggists standardizes preparations of this extremely powerful and important drug by testing their action upon frogs.

Preparations

The preparations of Foxglove on the market vary considerably in composition and strength. Powdered Digitalis leaf is administered in pill form. The pharmacopoeial tincture, which is the preparation in commonest use, is given in doses of 5.15 minims, and the infusion is the unusually small dose of 2 to 4 drachms, the dose of other infusions being an ounce or more. The tincture contains a fair proportion of both Digitalin and Digitoxin.

The following note from the *Chemist and Druggist* (December 30, 1922) is of interest here:

Cultivation of Digitalis

As is well known, for many years prior to the War digitalis was successfully cultivated on a large scale in various parts of the former Austro-Hungarian monarchy, and indeed the Government actively promoted the cultivation of this as well as of other medicinal plants.

Pater, of Klausenburg, gives a résumé of his experiences in this direction (*Pharmazeutische Monatshefte*, 7, 1922), dealing not only with the best methods for cultivating digitalis from the seeds of this plant, but also with his investigations into certain differences and abnormalities peculiar to *Digitalis purpurea*.

Apart from the fact that, occasionally, some plants bear flowers already in the first year of growth, the observation was made that the colour of the flowers showed a wide scale of variation, ranging from the well-known distinctive purple shade through dark rose, light rose, to white.

These variations in colour of the flowers of cultivated digitalis plants induced the author to undertake a study of the activity of the several varieties, based on the digitoxin content of the stem leaves collected from flowering plants.

In the case of *Digitalis purpurea* with normal purple flowers, the content of purified digitoxin, ascertained by Keller's method, averaged 0.17 percent, while the leaves of plants bearing white flowers showed a slightly lower content, *i.e.* an average of 0.155 percent of purified digitoxin. On the other hand, the plants with rose-coloured flowers were found to possess a very low content of digitoxin, averaging only 0.059 percent. In the course of these investigations the fact was confirmed that the upper stem leaves are more active than the lower leaves.'

Medicinal Action and Uses

Digitalis has been used from early times in heart cases. It increases the activity of all forms of muscle tissue, but more especially that of the heart and arterioles, the all-important property of the drug being its action on the circulation. The first consequence of its absorption is a contraction of the heart and arteries, causing a very high rise in the blood pressure.

After the taking of a moderate dose, the pulse is markedly slowed. Digitalis also causes an irregular pulse to become regular. Added to the greater force of cardiac contraction is a permanent tonic contraction of the organ, so that its internal capacity is reduced, which is a beneficial effect in cases of cardiac dilatation, and it improves the nutrition of the heart by increasing the amount of blood.

In ordinary conditions it takes about twelve hours or more before its effects on the heart muscle is appreciated, and it must thus always be combined with other remedies to tide the patient over this period and never prescribed in large doses at first, as some patients are unable to take it, the drug being apt to cause considerable digestive disturbances, varying in different cases. This action is probably due to the Digitonin, an undesirable constituent.

The action of the drug on the kidneys is of importance only second to its action on the circulation. In small or moderate doses, it is a powerful diuretic and a valuable remedy in dropsy, especially when this is connected with affections of the heart. It has also been employed in the treatment of internal haemorrhage, in inflammatory diseases, in delirium tremens, in epilepsy, in acute mania and various other diseases, with real or supposed benefits.

The action of Digitalis in all the forms in which it is administered should be carefully watched, and when given over a prolonged period it should be employed with caution, as it is liable to accumulate in the system and to manifest its presence all at once by its poisonous action, indicated by the pulse becoming irregular, the blood-pressure low and gastrointestinal irritation setting in.

The constant use of Digitalis, also, by increasing the activity of the heart, leads to hypertrophy of that organ. Digitalis is an excellent antidote in Aconite poisoning, given as a hypodermic injection. When Digitalis fails to act on the heart as desired, Lily-of-the-Valley may be substituted and will often be found of service.

In large doses, the action of Digitalis on the circulation will cause various cerebral symptoms, such as seeing all objects blue, and various other disturbances of the special senses. In cases of poisoning by Digitalis, with a very slow and irregular pulse, the administration of Atropine is generally all that is necessary. In the more severe cases, with the very rapid heart-beat, the stomach pump must be used, and drugs may be used which depress and diminish the irritability of the heart, such as chloral and chloroform.

Preparations of Digitalis come under Table II of the Poison Schedule.

Preparations and Dosages

Tincture, B.P., 5 to 15 drops. Infusion, B.P., 2 to 4 drachms. Powdered leaves, 1/2 to 2 grains. Fluid extract, 1 to 3 drops. Solid extract, U.S.P., 1/8 grain.

A method of preparing the drug in a noninJurious manner is given in the *Chemist and Druggist* (December 30, 1922):

'Digitalis Maceration

'On preparing an infusion of digitalis leaves in the usual manner, one of the active principles, gitalin, is destroyed by the action of the boiling water. To obviate the possibility of destroying any of the active principles in the leaves, Th. Koch (*Süddeutsche Apotheker-Zeitung*, 63, 1922) has for some years past adopted the following procedure: 20 gm. powdered standardized digitalis leaves, 1000 gm. chloroform water (7.1000) and 40 drops of 10 percent. Solution of Sodium Carbonate are shaken for four hours. The liquid is then passed through a flannel cloth, and, after standing for some time, filtered in the ordinary way, taking the precaution to cover the filter with a glass plate.

The use of chloroform water as the solvent serves a threefold purpose: It promotes the solution of the gitalin present in the leaves, ensures the stability and keeping properties of the maceration, and prevents the occurrence of gastric troubles.

The presence of Sodium Carbonate prevents the plant acid from reacting with the chloroform to produce hydrochloric acid. In this maceration no digitoxin is present, the principle which is assumed to exert a deleterious action on the heart as well as a cumulative effect.'

G

GELSEMIUM

Botanical: Gelsemium nitidum (MICH.)

Family: N.O. Loganiaceae.

Synonyms: Yellow Jasmine. Gelsemium Sempervirens (Pers.). False Jasmine. Wild Woodbine. Carolina Jasmine.

Part Used: Root.

Habitat: Gelsemium is one of the most beautiful native plants of North America, occurring in rich, moist soils, by the sides of streams, along the seacoast from Virginia to the south of Florida, extending into Mexico.

The important drug *Gelsemium*, official in the principal Pharmacopoeias, is composed of the dried rhizome and root of *Gelsemium nitidum* (Michaux), a climbing plant growing in the southern States of North America and there known as Yellow Jasmine, though it is in no way related to the Jasmines, and is best distinguished as Caroline Jasmine, as it belongs to the Loganiaceae, an order that forms a connecting link between the orders Gentianaceae, Apocynaceae, Scrophulariaceae and Rubiaceae. The plant is not to be confounded with the true Yellow Jasmine (*Jasminum odoratissimum*), of Madeira, which is often planted in the southern States for the sake of its fragrant flowers and has also been known there under the name of Gelseminum; this has only two stamens, while Gelsemium has five.

Introduction

Its woody, twining stem often attains great height, its growth depending upon its chosen support, ascending lofty trees and forming festoons from one tree to another. It contains a milky juice and bears opposite, shining and evergreen lanceolate leaves and axillary clusters of from one to five large, funnel-shaped, very fragrant yellow flowers, which during its flowering season, in early spring, scent the atmosphere with their delicious odour. The fruit is composed of two separable, jointed pods containing numerous, flat-winged seeds.

The stem often runs underground for a considerable distance, and these portions (the rhizome) are used indiscriminately with the roots in medicine, and exported from the United States in bales.

The plant was first described in 1640 by John Parkinson, who grew it in his garden from seed sent by Tradescant from Virginia; at the present time it is but rarely seen, even in botanic gardens, in Great Britain, and specimens grown at Kew have not flowered.

Introduction of the Drug

The drug in commerce mostly consists of the underground stem or rhizome, with occasional pieces of the root. The rhizome is easily distinguished by occurring in nearly straight pieces, about 6 to 8 inches long, and 1/4 to 3/4 inch in diameter, having a small dark pith and a purplish-brown, longitudinally fissured bark.

The root is smaller, tortuous, and of a uniform yellowish-brown colour, finely wrinkled on the surface. Both rhizome and root in transverse section exhibit a distinctly radiate appearance, the thin cortex or bark enclosing a large, pale, yellowish-white wood, which consists of narrow bundles with small pores, alternating with straight, whitish, medullary rays about six or eight cells in thickness. In the case of the rhizome, a small pith, frequently divided into four nearly equal parts, is also present, particularly in smaller and younger pieces.

The drug is hard and woody, breaking with an irregular splintery fracture, and frequently exhibits silky fibres in the bast, which are isolated, or occur in groups of two or three and form an interrupted ring, whereas in the aerial stem, they are grouped in bundles.

The drug has a bitter taste, due to the presence of alkaloids, which occur chiefly in the bark. The slight aromatic odour is probably due to the resin in the drug.

Collection

Adulterations: The drug is commonly collected in the autumn and dried. Though consisting usually of the dried rhizomes with only the larger roots attached, sometimes smaller roots are present, and it is often adulterated with the aerial portions of the stem, which can be easily detected by the thinness and dark-purplish colour of the latter. It is stated to be destitute of alkaloid and therefore of no medicinal value.

Similar roots of Jasmine, especially those of *Jasminum fruticans*, are sometimes intermixed, and can be distinguished by the absence of indurated pith cells, which occur in Gelsemium, by the abundance of thin-walled starch cells in the pith and in the medullary ray cells (those of Gelsemium being thickwalled and destitute of starch), and by the bast fibres round the sieve tubes.

Constituents

Gelsemium contains two potent alkaloids, Gelseminine and Gelsemine. Gelseminine is a yellowish, bitter andpoisonous amorphous alkaloid, readily soluble in ether and alcohol, forming amorphous salts.

The alkaloid Gelsemine is colourless, odourless, intensely bitter and forms crystalline salts. It is only sparingly soluble inwater, but readily forms a hydrochloride, which is completely so.

This alkaloid is not to be confounded with the resinoid known as 'Gelsemin,' an eclectic remedy, a mixture of substances obtained by evaporating an alcoholic extract of Gelsemium to dryness. The rhizome also contains Gelsemic acid a crystalline substance which exhibits an intense bluish-green fluorescence in alkaline solution; it is probably identical with methylaesculatin or chrysatropic acid found in Belladonna root. There are also present in the root 6 percent of a volatile oil, 4 percent of resin and starch.

Poisoning by Gelsemium

The drug is a powerful spinal depressant; its most marked action being on the anterior cornus of grey matter in the spinal cord. The drug kills by its action on the respiratory centre of the medulla oblongata. Shortly after the administration of even a moderate dose, the respiration is slowed and is ultimately arrested, this being the cause of death. Poisonous doses of Gelsemium produce a sensation of languor, relaxation and muscular weakness, which may be followed by paralysis if the dose is sufficiently large. The face becomes anxious, the temperature subnormal, the skin cold and clammy and the pulse rapid and feeble. Dropping of the upper eyelid and lower jaw, internal squint, double vision and dilatation of the pupil are prominent symptoms. The respiration becomes slow and feeble, shallow and irregular, and death occurs from centric respiratory failure, the heart stopping almost simultaneously.

Consciousness is usually preserved until late in the poisoning, but may be lost soon after the ingestion of a fatal dose. The effects usually begin in half an hour, but sometimes almost immediately. Death has occurred at periods varying from 1 to 7 1/2 hours. The treatment of Gelsemium poisoning consists in the prompt evacuation of the stomach by an emetic, if the patient's condition permits; and secondly, and equally important, artificial respiration, aided by the early administration, subcutaneously, of ammonia, strychnine, atropine or digitalis.

An allied species, G. elegans (Benth.) of Upper Burma, is used in China as a criminal poison, its effects are very rapid.

Medicinal Action and Uses

Antispasmodic, sedative, febrifuge, diaphoretic.

The medical history of the plant is quite modern. It is stated to have been brought into notice by a Mississippi planter, for whom, in his illness, the root was gathered in mistake for that of another plant.

After partaking of an infusion, serious symptoms arose, but when, contrary to expectations, he recovered, it was clear that the attack of bilious fever from which he had been suffering had disappeared. This accidental error led to the preparation from the plant of a proprietary nostrum called the 'Electric Febrifuge.' Later, in 1849, Dr. Porcher, of South Carolina, brought Gelsemium to the notice of the American Medical Association. Dr. Henry, in 1852, and after him many others, made provings of it the chief being that of Dr. E. M. Hale, whose *Monograph on Gelsemium* was an efficient help to the true knowledge of the new American drug. In America, it was formerly extensively used as an arterial sedative and febrifuge in various fevers, more especially those of an intermittent character, but now it is considered probably of little use for this purpose, for it has no action on the skin and no marked action on the alimentary or circulatory system.

It has been recommended and found useful in the treatment of spasmodic disorders, such as asthma and whooping cough, spasmodic croup and other conditions depending upon localized muscular spasm. In convulsions, its effects have been very satisfactory. It is, at present, mainly used in the treatment of neuralgic pains, especially those involving the facial nerves, particularly when arising from decaying teeth. It is said it will suspend and hold in check muscular irritability and nervous excitement with more force and power than any known remedy.

While it relaxes all the muscles, it relieves, by its action on the general system, all sense of pain. The drug is also said to be most useful in the headache and sleeplessness of the drunkard and in sick headache. It has been used in dysmenorrhoea, hysteria, chorea and epilepsy, and the tincture has been found efficacious in cases of retention of urine.

Some recommend its use in acute rheumatism and pleurisy, in pneumonia and in bronchitis, and it has been advocated, though not accepted by all authorities, as of avail in the early stages of typhoid fever.

H.

HELLEBORE, BLACK

Botanical: Helleborus niger (LINN.)

Family: N.O. Ranunculaceae.

Synonyms: Christe Herbe. Christmas Rose. Melampode.

Parts Used: Rhizome, root.

Habitat: It is a native of the mountainous regions of Central and Southern Europe, Greece and Asia Minor, and is cultivated largely in this country as a garden plant.

Supplies of the dried rhizome, from which the drug is prepared, have hitherto come principally from Germany.

Two allied species are natives of this country, but this particular kind does not grow wild here.

The Black Hellebore—once known as Melampode—is a perennial, low-growing plant, with dark, shining, smooth leaves and flower-stalks rising directly from the root, its pure white blossoms appearing in the depth of winter and thereby earning for it the favourite name of Christmas Rose.

The generic name of this plant is derived from the Greek elein (to injure) and bora (food), and indicates its poisonous nature. The specific name refers to the dark coloured rootstock.

The Black Hellebore used by the Greeks has been identified by Dr. Sibthorp as Helleborus officinalis, a handsome plant, with a branching stem, bearing numerous serrated bracts, and three to five whitish flowers. It is a native of Greece, Asia Minor, etc.

The two species found wild in many parts of England, especially on a limestone soil, are H. Foetidus, the Bearsfoot, and H. Viridis, the Green Hellebore; the latter has injurious effects on cattle if eaten by them.

Both these British species possess powerful medicinal effects and are at times substituted for the true H. niger.

History

According to Pliny, Black Hellebore was used as a purgative in mania by Melampus, a soothsayer and physician, 1,400 years before Christ, hence the name Melampodium applied to Hellebores. Spenser in the Shepheard's Calendar, 1579, alludes to the medicinal use of Melampode for animals. Parkinson, writing in 1641, tells us:

'a piece of the root being drawne through a hole made in the eare of a beast troubled with cough or having taken any poisonous thing cureth it, if it be taken out the next day at the same houre.'

Parkinson believed that White Hellebore would be equally efficacious in such a case, but Gerard recommends the Black Horehound only, as being good for beasts. He says the old farriers used to 'cut a slit in the dewlap, and put in a bit of Beare-foot, and leave it there for daies together.'

Gerard describes the plant in these words:

'It floureth about Christmas, if the winter be mild and warm . . . called Christ her be. This plant hath thick and fat leaves of a deep green colour, the upper part whereof is somewhat bluntly nicked or toothed, having sundry diversions or cuts, in some leaves many, in others fewer, like unto a female Peony.

It beareth rose-coloured flowers upon slender stems, growing immediately out of the ground, an handbreadth high, sometimes very white, and ofttimes mixed with a little shew of purple, which being faded, there succeed small husks full of black seeds; the roots are many; with long, black strings coming from one end.'

Once, people blessed their cattle with this plant to keep them from evil spells, and for this purpose, it was dug up with certain mystic rites. In an old French romance, the sorcerer, to make himself invisible when passing through the enemy's camp, scatters powdered Hellebore in the air, as he goes.

The following is from *Burton's Anatomy of Melancholy*:

—'Borage and hellebore fill two scenes,
—Sovereign plants to purge the veins
—Of melancholy, and cheer the heart
—Of those black fumes which make it smart.'

Cultivation

All kinds of Hellebore will thrive in ordinary garden soil, but for some kinds prepared soil is preferable, consisting of equal parts of good fibry loam and well decomposed manure, half fibry peat and half coarse sand. Thorough drainage is necessary, as stagnant moisture is very injurious.

It prefers a moist, sheltered situation, with partial shade, such as the margins of shrubberies. If the soil is well trenched and manured, Hellebore will not require replanting for at least seven years, if grown for flowering, but a top dressing of well-decayed manure and a little liquid manure might be given during the growing season, when plants are making their foliage.

Propagation is by seeds, or division of roots. Seedlings should be pricked off thickly into a shady border, in a light, rich soil. The second year they should be transplanted to permanent quarters, and will bloom in the third year. For division of roots, the plant is strongest in July, and the clumps to be divided must be well established, with rootstocks large enough to cut. The plants will be good flowering plants in two years, but four years are required to bring them to perfection.

Part Used

The rhizome, collected in autumn and dried. The root has a slight odour, when cut or broken, somewhat resembling Senega root. The dry powder causes violent sneezing. It has a somewhat bitter-sweet and acrid taste.

Constituents

Two crystalline glucosides, Helleborin and helleborcin, both powerful poisons. Helleborin has a burning, acrid taste and is narcotic, helleborcin has a sweetish taste and is a highly active cardiac poison, similar in its effects to digitalis and a drastic purgative. Other constituents are resin, fat and starch. No tannin is present.

Medicinal Action and Uses

The drug possesses drastic purgative, emmenagogue and anthelmintic properties, but is violently narcotic. It was formerly much used in dropsy and amenorrhoea, and has proved of value in nervous disorders and hysteria. It is used in the form of a tincture, and must be administered with great care.

Applied locally, the fresh root is violently irritant.

Preparations and Dosages

Fluid extract, 2 to 10 drops. Solid extract, 1 to 2 grains. Powdered root, 10 to 20 grains as a drastic purge, 2 to 3 grains as an alterative. Decoction, 2 drachms to the pint, a fluid ounce every four hours till effective.

A tincture of the fresh root of *H. foetidus* is used in homoeopathy.

HELLEBORE, FALSE

Botanical: Adonis autumnalis, Adonis vernalis.

Family: N.O. Ranunculaceae.

Synonyms: Red Chamomile. Pheasant's Eye.

Adonis. Red Morocco. Rose-a-rubie. Red Mathes. Sweet Vernal.

Part Used: Herb.

The Pheasant's Eye (*Adonis autumnalis*), a plant very nearly allied to the Anemone, is sometimes found wild in England, mostly in cornfields in Kent, but is often regarded as a mere garden escape. Though generally only a cultivated species in this country, it is common enough on the Continent.

It is a graceful plant, growing about a foot high, with finely cut leaves and terminal flowers like small scarlet buttercups.

History

Its Latin name is derived from the ill-fated Adonis,fromwhoseblooditsprang,according to the Greek legends. 'Red Morocco' was a somewhat strange old English name for this plant, also 'Rose-a-rubie' and 'Red Mathes,' 'by which name,' says Gerard, 'it is called of them that dwell where it groweth naturally and generally red camomill'—the latter on account of the finely-cut leaves. It is now aptly called Pheasant's Eye, on account of its brilliant little scarlet and black blossoms.

Although named *A. autumnalis*, it blossoms throughout the summer, commencing to flower in June, and the seeds ripen in August and September. It is an annual, propagated by its seeds, which may be sown at almost any season, but should always be sown where the plant is to grow, because it does not bear transplanting. Any soil will suit it: it blossoms more freely in the sunshine, but willalso flourish in shade.

In olden days it was considered to have some medicinal value, but is no longer used. Its near relative, *A. vernalis* (or 'Ox-eye'), though not officinal, is still regarded of medicinal value, and is a perennial species, not a native of this country, but common in central Europe, where its root is often used in the place of Black Hellebore.

'*A. vernalis* is one of the brightest and most effective of spring plants, known in many places as Sweet Vernal. It might be said of this, as of the Daffodil, that it "takes the winds of March with beauty," for often before the month is out it opens its rich, golden Anemone-like cups to the sun, and when planted in profusion, presents a glowing mass of colour.

The plant is only about 9 inches high, and its foliage is one of its beauties. It makes a good addition to the rockery. Another species, *A. amurensis*, which is among the earliest of all the flowers, for it comes into bloom in February and March, is rather taller, and the foliage is more finely cut. There is a double variety, *flore pleno*, with large, yellow flowers. These plants will grow in any good garden soil, well drained and not too heavy. They should have a sunny position, but should not be allowed to suffer from drought during summer. They are quite hardy, and if left undisturbed improve from year to year.'

Constituents

A. vernalis contains a glucoside Adonidin and has an action almost exactly like that of digitalin, but is much stronger and is said not to be cumulative. It appears to be about ten times as powerful as digitoxin. It has been prescribed instead of digitalis, and sometimes succeeds where digitalis fails, especially where there is kidney disease. It is, however, less certainly beneficial in valvular disease than digitalis, and should be used only where digitalis fails. It produces vomiting and diarrhoea more readily than digitalis. It is given in the form of an infusion.

Preparations and Dosages

Fluid extract, 1 to 2 drops. Glucoside adonidin, 1/4 to 1/2 grain.

The infusion is made with 1/4 oz. of the herb to a pint of boiling water and given in tablespoonful doses every three hours.

HELLEBORE, GREEN

Botanica: Veratrum viride.

Family: N.O. Melanthaceae or Liliaceae.

Synonyms: American Hellebore. Swamp Hellebore. Indian Poke. Itch-weed.

Parts Used: Dried rhizome and roots.

Habitat: Swamps, low grounds, and moist meadows of the United States.

Introduction

For commercial convenience, the roots are usually broken into small pieces or fragments, but are sometimes sliced, the cut surface being of a dingy white colour, or whole, the outside dark brown, with characteristic markings. Often, portions of the dried stem or leafstalks remain attached, and these, being inert, should be rejected.

American Hellebore closely resembles the German *Veratrum album*, or White Hellebore, and the Mexican V. *officinale*, or Sabadilla (Cevadilla), N.O. Liliaceae. The name Veratrine is given to the mixture of bases obtained from Sabadilla by extracting with alcohol, distilling off the alcohol, and precipitating the mixed bases with ammonia. Official in the Pharmacopoeia of 1898. The British Pharmacopoeia Codex preparation is *Oleinatum Veratrinae.*

Constituents

It has been found that the alkaloids contained in V. viride are not the same as the veratrine contained in V. album and the seeds of Sabadilla. The principal alkaloids are Pseudojervine, Rubijervine, Jervine, Cevadine, Protoveratrine, and Protoveratridine. The last is probably a decomposition product, it is highly poisonous, and sternutatory. Starch and resin are also present.

Medicinal Action and Uses

Emetic, diaphoretic, sedative, highly poisonous. The German White Hellebore, resembling the American, but without its cevadine, is rarely given internally, but the powder has been used in preparing an ointment for itch.

Veratrine, a pale grey amorphous powder, is used externally as an analgesic, and also as a parasiticide. It is not known to affect the living blood but when the latter is drawn, veratrine kills the white corpuscles. Violent pain and irritation are caused if it is given internally or subcutaneously.

It prolongs the contractions of heart and muscles. Its only justifiable use is as an anodyne counter irritant, especially for neuralgia.

It was emphatically decided a few years ago that *V. viride* should *whenever possible* be used instead of the European *V. album*, which is more likely to upset the intestines.

The various alkaloids present act in very different manners, and none in exactly the same way as the whole drug—jervine, for example, is less poisonous than the drug itself, while protoveratrine, although present in small quantity, is extremely toxic.

A moderate dose of veratrum produces a reduction in the rate of the pulse, with a fall in the arterial pressure. There may be slowing of respiration. It has been used in the treatment of pneumonia, peritonitis, and other sthenic fevers, but is chiefly useful in chronic diseases, such as arterio-sclerosis and interstitial nephritis. It differs from digitalis in that it diminishes cardiac tone, and has been used for threatened apoplexy and 'irritable heart'; also for puerperal eclampsia. Sabadilla is the principal ingredient of the *pulvis capocinorum*, sometimes used in Europe for the destruction of vermin in the hair.

Dosages

V. viride, from 1 to 3 minims of the fluid extract every two or three hours until pulse rate is reduced. 1 to 2 grains. Of U.S. tincture, 10 to 30 minims.

V. album, 1 to 2 grains in powder. Rarely given internally.

Veratrine, 1/30 grain.

Poisons, if any, and Antidotes

Causes vomiting, with much nausea and retching. Pulse slow, later, rapid and irregular. Prostration, perspiration, pallor, with shallow and sometimes stertorous breathing.

If there is vomiting, two glasses of water should be given and 20 grains of tannic acid as an imperfect chemical antidote. Should vomiting not occur, it must be provoked, or a stomach pump employed. The patient must be kept in a horizontal position, not even being allowed to sit up to vomit. To stop the vomiting a counter-irritant must be used over the epigastrium and morphine employed very cautiously. In the early stages, when the pulse is low, atropine is very valuable, or active respiratory stimulants, such as hypodermic injections of ammonia and strychnine. If the bodily temperature is low, heat can be applied externally.

HELLEBORE, WHITE

Botanical: Veratrum album.

Family: N.O. Lilaceae.

Synonyms: Veratrum Lobelianium. Veratrum Californicum. Weiszer Germer. Weisze Nieszwurzel.

Parts Used: Rhizome, root.

Habitat: Europe, from Lapland to Italy. Does not occur in the British Isles.

Introduction

Veratrum Album closely resembles the American species, but is distinguished by its yellowish-white flower.

The fresh rhizome has an alliaceous odour, but when dried it has no marked smell. Its taste is first sweet, then bitter and acrid, leaving the tongue tingling and numb. Its powder is ash-coloured. White Hellebore deteriorates by keeping. It is scarcely ever used *internally* owing to the severity of its action. It is stated to have been one of the principal poisons used in Europe for arrows, daggers, etc.

Constituents

Authorities differ as to the presence or absence of the veratria of cevadilla. It contains jervine, pseudo-jer-vine, rubijervine, veratralbine and veratrine. Cevadine is stated to be absent. There is fatty matter, composed of olein, stearin and a volatile acid, supergallate of Veratia, yellow colouring matter, starch ligneous matter, and gum; the ashes contain much phosphate and carbonate of lime, carbonate of potassa and some traces of silica, and sulphate of lime. There has been found in it a white, crystalline, fusible and inflammable substance called barytin, of which the properties have not been thoroughly investigated.

Medicinal Action and Uses

A violent, irritant poison. When snuffed up the nose it occasions profuse running of the nose; when swallowed, severe vomiting and profuse diarrhoea.

It was formerly used in cerebral affections, such as mania, epilepsy, etc., and for gout, as a substitute for colchicum or the Eau Mediciale of Husson, when 3 parts of the wine of White Hellebore added to 1 part of laudanum was given in doses of from 1/2 fluid drachm to 2 fluid drachms.

It is occasionally used in the form of an ointment or decoction in obstinate skin diseases such as scabies, or to kill lice, but even this use is not free from danger. It is also occasionally used as an errhine or sternutatory, diluted with starch or other mild powder, in cases of amaurosis and chronic affections of the brain.

The principal use of the plant is in veterinary medicine.

Dosages

Of the powder, 1 to 8 grains, gradually and cautiously increased, commencing with 1 grain. Of the vinous tincture, from 20 to 60 minims.

Poisons, if any, and Antidotes

Narcotic symptoms, such as stupor and convulsions, appear in addition to vomiting and diarrhcea, when the dose is fatal. The poison may be treated by drinks and injections of coffee, stimulants to overcome the depressed condition of the heart and arteries, and opiates and demulcents to relieve internal inflammation.

Other Species

Helleborus orientalis (Lam.). A tincture ofthe root is used in homoeopathy for indigestion and diarrhcea.

HEMLOCK

Botanical: Conium maculatum (LINN.).

Family: N.O. Umbelliferae.

Synonyms: Herb Bennet. Spotted Corobane. Musquash Root. Beaver Poison. Poison Hemlock. Poison Parsley. Spotted Hemlock. Kex. Kecksies.

Parts Used: Leaves, fruit, seeds.

Habitat: It is by no means an uncommon plant in this country, found on hedgebanks, in neglected meadows, on waste ground and by the borders of streams in most parts of England, occurring in similar places throughout Europe (except the extreme north) and also in temperate Asia and North Africa. It has been introduced into North and South America.

The Hemlock is a member of the great order Umbelliferae, the same family of plants to which the parsley, fennel, parsnip and carrot belong.

Many of the umbelliferous plants abound in an acrid, watery juice, which is more or less narcotic in its effects on the animal frame, and which, therefore, when properly administered in minute doses, is a valuable medicine. Among these the most important is Conium, or Hemlock. Every part of this plant, especially the fresh leaves and fruit, contains a volatile, oily alkaloid, which is so poisonous that a few drops prove fatal to a small animal.

History

The Ancients were familiar with the plant, which is mentioned in early Greek literature, and fully recognized its poisonous nature. The juice of hemlock was frequently administered to criminals, and this was the fatal poison which Socrates was condemned to drink. The old Roman name of *Conium* was *Cicuta*, which prevails in the mediaeval Latin literature, but was applied about 1541 by Gesner and others to another umbelliferous plant, *Cicuta virosa*, the Water Hemlock, which does not grow in Greece and southern Europe. To avoid the confusion arising from the same name for these quite dissimilar plants, Linnaeus, in 1737, restored the classical Greek name and called the Hemlock (*Conium maculatum*), the generic name being derived from the Greek word *Konas*, meaning to whirl about, because the plant, when eaten, causes vertigo and death.

The specific name is the Latin word, meaning 'spotted,' and refers to the stem-markings. According to an old English legend, these purple streaks on the stem represent the brand put on Cain's brow after he had committed murder.

Hemlock was used in Anglo-Saxon medicine, and is mentioned as early as the tenth century. The name Hemlock is derived from the Anglo-Saxon words *hem* (border, shore) and *leác* (leek or plant). Another authority derives the British name 'hemlock' from the Anglo-Saxon word healm (straw), from which the word 'haulm' is derived.

The use of Hemlock in modern medicine is due chiefly to the recommendation of Storch, of Vienna, since when (1760) the plant has been much employed, though it has lost some of its reputation owing to the uncertain action of the preparations made from it.

Introduction

Hemlock is a tall, much branched and gracefully growing plant, with elegantly-cut foliage and white flowers. Country people very generally call by the name of Hemlock many species of umbelliferous plants, but the real Hemlock may be distinguished by its slender growth, perfectly smooth stem which is marked with red, and its finely-divided leaves which are also smooth.

It is a biennial plant, usually growing from 2 to 4 feet high, but in sheltered situations sometimes attaining nearly double that height. The root is long, forked, pale yellow and 1/2 to 3/4 inch in diameter. The erect, smooth stem, stout below, much branched above and hollow, is bright green, but (as already stated) is distinctively mottled with small irregular stains or spots of a port-wine colour and also covered with a white 'bloom' which is very easily rubbed off.

The *leaves* are numerous, those of the first year and the lower ones very large, even reaching 2 feet in length, alternate, longstalked, tripinnate (divided along the midrib into opposite pairs of leaflets and these again divided and subdivided in similar manner). The upper leaves are much smaller, nearly stalkless, with the short footstalk dilated and stem-clasping, often opposite or three together, more oblong in outline, dipinnate or pinnate, quite smooth, uniform dull green, segments toothed, each tooth being tipped with a minute, sharp white point.

The *umbels* are rather small, 1 1/4 to 2 inches broad, numerous, terminal, on rather short flower stalks, with 12 to 16 rays to the umbel. At the base of the main umbel there are 4 to 8 lance-shaped, deflexed bracts; at the base of the small umbels there are three or four spreading bractlets. The flowers are small, their petals white with an inflexed point, the stamens a little longer than the petals, with white anthers.

The *fruit* is small, about 1/8 inch long broad, ridged, compressed laterally and smooth. Both flowers and fruit bear a resemblance to caraway, but the prominent crenate (wavy) ridges and absence of vittae (oil cells between the ridges) are important characters for distinguishing this fruit from others of the same natural order of plants.

The entire plant has a bitter taste and possesses a disagreeable mousy odour, which is especially noticeable when bruised. When dry, the odour is still disagreeable, but not so pronounced as in the fresh plant.

The seeds or fruits have very marked odour or taste, but when rubbed with a solution of potassium bi-oxide, the same disagreeable mouse-like odour is produced.

The poisonous property occurs in all parts of the plant, though it is stated to be less strong in the root. Poisoning has occurred from eating the leaves for parsley, the roots for parsnips and the seeds in mistake for anise seeds. Many children, too, have suffered by using whistles made from the hollow stems of the Hemlock, which should be extirpated from meadows and pastures since many domestic animals have been killed by eating it, though goats are said to eat it with impunity.

Parts Used, Harvesting and Drying

The leaves and fruit. The fresh green Hemlock is employed in the preparation of Juice of Conium, Conium Ointment, and the green Extract of Conium.

The British pharmacopoeia directs that the leaves and young branches should be gathered from wild British plants when the flowers are fully matured, and the fruits are just beginning to form, as they then possess their greatest medicinal activity. This is about the end of June.

The smaller leaves are selected and the larger stalks picked out and discarded.

The leaves separated from the branches and *dried* are also official.

The *dried ripe fruit* is official in the British Pharmacopceia, and the Pharmacopceia of India, but in the Pharmacopceia of the United States the full-grown fruit, gathered before it turns from green to yellow and carefully dried, is directed to be used. Hemlock fruits were introduced into British medicine in 1864 as a substitute for the dried leaf in making the tincture, but it has been shown that a tincture, whether of leaf or fruit, is far inferior to the preserved juice of the herb.

Constituents

By far the most important constituent of hemlock leaves is the alkaloid Coniine, of which they may contain, when collected at the proper time, as much as 2.77 percent the average being 1.65 percent.

When pure, Coniine is a volatile, colourless, oily liquid, strongly alkaline, with poisonous properties and having a bitter taste and a disagreeable, penetrating, mouse-like odour.

There are also present the alkaloids, Methyl-coniine, Conhydrine, Pseudoconhydrine, Ethyl piperidine, mucilage, a fixed oil and 12 percent of ash.

Hemlock fruits have essentially the same active constituents, but yield a greater portion of Coniine than the leaves.

Medicinal Action and Uses

As a medicine, Conium is sedative and antispasmodic, and in sufficient doses acts as a paralyser to the centres of motion. In its action it is, therefore, directly antagonistic to that of Strychnine, and hence it has been recommended as an antidote to Strychnine poisoning, and in other poisons of the same class, and in tetanus, hydrophobia, etc. (In mediaeval days, Hemlock mixed with betony and fennel seed was considered a cure for the bite of a mad dog.)

On account of its peculiar sedative action on the motor centres, Hemlock juice (Succus conii) is prescribed as a remedy in cases of undue nervous motor excitability, such as teething in children, epilepsy from dentition. cramp, in the early stages of paralysis agitans, in spasms of the larynx and gullet, in acute mania, etc. As an inhalation it is said to relieve cough in bronchitis, whooping-cough, asthma, etc. The drug has to be administered with care, as narcotic poisoning may result from internal use, and overdoses produce paralysis. In poisonous doses it produces complete paralysis with loss of speech, the respiratory function is at first depressed and ultimately ceases altogether and death results from asphyxia. The mind remains unaffected to the last. In the account of the death of Socrates, reference is made to loss of sensation as one of the prominent symptoms of his poisoning, but the dominant action is on the motor system. It is placed in Table II of the Poison Schedule.

Hemlock was formerly believed to exercise an alterative effect in scrofulous disorders. Both the Greek and Arabian physicians were in the practice of using it for the cure of indolent tumours, swellings and pains of the joints, as well as for affections of the skin. Among the moderns Baron Storch was the first to call the attention of medical men to its use, both externally and internally, for the cure of cancerous and other ulcers, and in the form of a poultice or ointment it has been found a very valuable application to relieve pain in these cases.

In the case of poisoning by Hemlock, the antidotes are tannic acid, stimulants and coffee, emetics of zinc, or mustard and castor oil, and, if necessary, artificial respiration. It is essential to keep up the temperature of the body.

Like many other poisonous plants, when cut and dried, Hemlock loses much of its poisonous properties, which are volatile and easily dissipated. Cooking destroys it.

Its disagreeable odour has prevented its fatal use as a vegetable in the raw state.

Larks and quails are said to eat Hemlock with impunity, but their flesh becomes so impregnated with the poison that they are poisonous as food. Thrushes eat the fruits with impunity, but ducks have been poisoned by them.

Coles' *Art of Simpling:*

'If Asses chance to feed much upon Hemlock, they will fall so fast asleep that they will seem to be dead, in so much that some thinking them to be dead indeed have flayed off their skins, yet after the Hemlock had done operating they have stirred and wakened out of their sleep, to the grief and amazement of the owners.'

Adulteration

Commercial Conium occasionally contains the leaves of other umbelliferous plants somewhat like it in appearance, or it may even be almost wholly composed of such plants. Anise has been used as an adulterant of the fruit.

Among umbelliferous plants most frequently mistaken for the true Hemlock *Anthriscus sylvestris* (Wild Chervil) an Æthusa *Cynapium* (Fool's Parsley) have similar general characteristics, but are readily distinguished.

A. sylvestris has hairy, not smooth leaves, its fruit is elongated, not broad, and the bracts of the partial involucre (or involucels) are not directed outwards, as in the Hemlock. The stem also is *unspotted*.

Preparations and Dosages

Powdered leaves 1 to 3 grains. Fluid extract of leaves, 5 to 10 drops. Fluid extract of seeds, 2 to 5 drops. Tincture seeds, B.P., 1/2 to 1 drachm. Juice of leaves, B.P., 1 to 2 drachms. Solid extract, 2 to 6 grains. Ointment, B.P.

HEMLOCK, WATER

Botanical: Cicuta virosa.

Family: N.O. Umbelliferae.

Synonym: Cowbane.

Part Used: Root.

The leaves of the Water Hemlock are sometimes found admixed with those of Conium. This is a semi-aquatic plant growing in ditches and on the banks of pools and rivers, though not very common in England. It has similar properties to the true Hemlock.

Introduction

Water Hemlock is a perennial, with a short, thick, vertical, hollow rootstock, in shape somewhat like a parsnip, giving off whorls of slender, fibrous roots. The erect, very stout, hollow stem, rising 2 to 4 feet high or more, is smooth, branched and slightly furrowed. The lower leaves are large, 1 to 2 feet long and long-stalked; they are tripinnate, like the Hemlock. The upper leaves are divided into three leaflets, and each again into three (twice ternate). The flowers are pure white, arranged in rather large, longstalked umbels of 12 to 16 long, slender, curved rays. There is no general involucre.

The Water Hemlock may be distinguished from the true Hemlock as follows: (i) The pinnae of the leaves are larger and lanceshaped; (ii) the umbel of the flowers is denser and more compact; (iii) the stem is not spotted like the true Hemlock; (iv) the odour of the plant resembles that of smallage or parsley.

Both plants are poisonous; but while the root of the Water Hemlock is acrid and powerfully poisonous in its fresh state, though it loses its virulent qualities when dried, that of the true Hemlock possesses little or no active power.

The Water Hemlock produces tetanic convulsions, and is fatal to cattle. In April, 1857, two farmer's sons were found lying paralysed and speechless close to a ditch where they had been working. Assistance was soon rendered, but they shortly expired. A quantity of the Water Hemlock grew in the ditch, where they had been employed. A piece of the root was subsequently found with the marks of teeth in it, near to where the men lay, and another piece of the same root was discovered in the pocket of one of them.

Constituents

A resinous body has been obtained from *Cicuta virosa* named Cicutoxin, an amorphous substance of acid reaction, of slight odour, but disagreeable taste; the dry root yields 3 to 5 percent. The presence of a volatile alkaloid termed Cicutine has also been traced.

HEMP, INDIAN

Botanical: Cannabis sativa (LINN.)

Family: N.O. Urticaceae.

Synonyms: Cannabis Indica. Cannabis Chinense. Ganeb. Ganja. Kif. Hanf. Tekrouri. Chanvre.

Part Used:The dried, flowering tops of the female, or pistillate plants.

Habitat: India.

In Britain, and formerly elsewhere, only Hemp grown in India was recognized as official, but the heavy tax has resulted in the admission by the United States of any active *Cannabis Sativa*, whether grown in the States or in Africa, Turkey, Turkestan, Asia Minor, Italy, or Spain.

Introduction

The plant is an annual, the erect stems growing from 3 to 10 feet or more high, very slightly branched, having greyish-green hairs. The leaves are palmate, with five to seven leaflets (three on the upper leaves), numerous, on long thin petioles with acute stipules at the base, linear-lanceolate, tapering at both ends, the margins sharply serrate, smooth and dark green on the upper surface, lighter and downy on the under one.

The small flowers are unisexual, the male having five almost separate, downy, pale yellowish segments, and the female a single, hairy, glandular, five-veined leaf enclosing the ovary in a sheath. The ovary is smooth, one-celled, with one hanging ovule and two long, hairy thread-like stigmas extending beyond the flower for more than its own length. The fruit is small, smooth, light brownish-grey in colour, and completely filled by the seed.

Hemp grows naturally in Persia, Northern India and Southern Siberia, and probably in China. It is largely cultivated in Central and Southern Russia. It is sometimes found as a weed in England, probably due to seeds from birdcages, as they are much used in feeding tame birds. The drug that is official in Europe comes from Bogra and Rajshabi, north of Calcutta, or sometimes from Guzerat and Madras. It is called Guaza by London merchants.

It is imported in parcels of small masses, with flowers, smaller leaves and a few ripe fruits pressed together by sticky, resinous matter. It is rough, brittle, dull-green in colour and almost tasteless, with a peculiar, slightly narcotic odour. It should be freed from resin by macerating in spirit and then soaking in water.

The leaves are said to be picked off to form *bhang*, and the little shoots which follow these are used as above, and called *ganja*. It is exported from Bombay in wooden cases. Two-year-old ganja is almost inert, and the law requires it to be burnt in the presence of excise officers. In the Calcutta areas the short tops are rolled under foot instead of being trodden, the weight of the workers being supported by a horizontal bamboo pole. This variety is very active, and is usually re-exported from England to the West Indies.

Hemp is prepared in various forms. *Ganja* is smoked like tobacco. *Bhang*, sidhee, or subjee is the dried, larger leaves, broken or mixed with a few fruits. It is pounded with water to make a drink, and is the chief ingredient of the sweetmeat *majun*. *Churrus* or *charas* is the resin which exudes spontaneously from the leaves, tops and stems.

A usual way of collecting it is for men in leathern garments to rush through the bushes, the resin being afterwards scraped off the clothes.

In Nepal the plant is squeezed between the palms of the hands, and in Baluchistan the resin is separated by rubbing the dried plant carefully between carpets. This is the hashish, *haschisch*, or *hashash* of the Arabians, the word 'assassin' being said to be derived from it, owing to the wild, fanatical courage given by its use. In Persia the woollen carpets, after scraping, are washed with water, and the evaporated extract is sold cheaply. Another way is to collect the dust after stirring dry bhang, this impure form of resin being only used for smoking.

Flat cakes called *hashish* by the Russians are a preparation made from Hemp in Central Asia, and also called nasha.

In Thibet *momea* or *mimea* is said to be made with Hemp and human fat.

Many electuaries and pastes are made with butter or other oily foundation, such as *majun* of *Calcutta*, mapouchari of Cairo, and the dawames of the Arabs.

The madjound of the Algerians is a mixture of honey and hashish powder.

Hemp Fibre is best produced by the plants in cooler latitudes, the best being obtained from Italy, but much from Russia. About one and a half million hundredweight are imported annually for cordage, sacking, and sail-cloths.

A *varnish* is made from the pressed seeds.

Two or three green twigs collected in spring and placed in beds will drive bedbugs from the room.

Constituents

Cannabinone or Hemp resin is soluble in alcohol and ether. Cannabinol is separated from it. It is fawn-coloured, in thin layers, and burns with a clear, white flame, leaving no ash. This is the active principle. There is a small amount of ambercoloured volatile oil, one of the linseed-oil group. It has been resolved into a colourless liquid called *cannabene*, and a solid hydride of this.

It is said that a volatile alkaloid has been found in the tops, resembling nicotine. It also contains alcoholic extract, ash, and the alkaloid Choline.

Medicinal Action and Uses

The principal use of Hemp in medicine is for easing pain and inducing sleep, and for a soothing influence in nervous disorders. It does not cause constipation nor affect the appetite like opium. It is useful in neuralgia, gout, rheumatism, delirium tremens, insanity, infantile convulsions, insomnia, etc. The tincture helps parturition, and is used in senile catarrh, gonorrhoea, menorrhagia, chronic cystitis and all painful urinary affections.

An infusion of the seed is useful in after pains and prolapsus uteri. The resin may be combined with ointments, oils or chloroform in inflammatory and neuralgic complaints. The drug deteriorates rapidly and hence is very variable, so that it is best given in ascending quantities to produce its effect. The deterioration is due to the oxidation of cannabinol and it should be kept in hermetically-sealed containers.

The action is almost entirely on the higher nerve centres. It can produce an exhilarating intoxication, with hallucinations, and is widely used in Eastern countries as an intoxicant, hence its names 'leaf of delusion,' 'increaser of pleasure,' 'cementer of friendship,' etc.

The nature of its effect depends much on the nationality and temperament of the individual. It is regarded as dangerous to sleep in a field of hemp owing to the aroma of the plants.

Dosage

Tincture, B.P. and U.S.P., 5 to 15 drops. Solid extract, B.P., 1/4 to 1 grain. Fluid extract, 1 to 3 drops. Of cannabis, 1 to 3 grains. Of best hashish, for smoking, 1/4 to 1 grain. Of tincture, 10 to 30 minims. Of tincture for menorrhagia, 5 to 10 minims. three to four times a day (*i.e.*, 24 grains of resinous extract in a fluid ounce of rectified spirit).

Of extract, from 1 to 20 grains, according to quality.

The following is stated to be a certain cure for gonorrhoea. Take equal parts of tops of male and female hemp in blossom. Bruise in a mortar, express the juice, and add an equal portion of alcohol. Take 1 to 3 drops every two to three hours.

SLANG NAMES FOR MARIJUANA

Devil Drug, Weed of Madness, Cannabis, Assassin of Youth, Mexican Ditch Weed, Hashish, Hay, Chronic, Blunts, Pot, Brick Weed, Ganja, joint, Acapulco Gold, dime Bag, Rope, Grass, Weed, "L", Jive Stick, Nickel Bag, MaryJane, Loco, Boom, Bhang, Ganja, Indo, Hydro, Stick.

HEMP

A tough fibre yielded by the large annual plant *Cannabis sativa*, of the natural order Cannabinaceae. There are, however, several other fibres known in commerce to which the term is more or less commonly applied. for example—Jute hemp is obtained from *Corchorus capsularis* and *C. olitorius*; Manilla hemp from Musa *textilis*; Brown hemp from *Hibiscus canabinus*; Pite or Pita hemp from several species of agave and aloe; Sunn hemp, Madras hemp, brown Bombay hemp and Malabar hemp, from Crotalaria juncea; *Jubbulpore hemp*, from *Crotalaria tenuifolia*, and several others.

The true hemp (*Cannabis sativa*) has been recognised as a useful plant from a very early period, although probably not of the same antiquity as flax. Herodotus is the first writer who mentions it (iv. 74), but he speaks of it in a manner which shows it must have been then well-known, for he describes the hempen garments made by the Thracians as being equal to linen (flax cloth) in fineness. Its use for making cordage is noted as early as 200 years B.C. by Moschion, who mentions that a large ship, the "syracusia," built by Hiero II, was rigged with ropes made from hemp brought from the Rhone.

The original country of the hemp-plant is not positively known, but it is generally believed to have been the mountainous districts in the extreme north of India, whence it spread westward through Europe, and southward through the peninsula of India. Its cultivation in each direction had in all probability a different object; for it is found to produce under tropical culture an inferior fibre, and a powerfully intoxicating drug, but in cold and temperate climates it yields an abundance of strong fibres in great perfection for textile purposes, and loses its narcotic qualities.

The similarity of its name in various languages is a strong indication that it has taken the course here indicated; thus, in the Sanscrit it is called *goni*, *sana*, or *shanapu*; *Persic*, *canna*; *Arabic*, *kanneh* or *kinnub*; *Greek*, *kannabis*; *Latin*, *cannabis*; *Italian*, *canapa*; *French*, *chanvre* or *chanbre*; *Danish*, *kamp* or *kennep*; *Lettish* and *Lithuanian*, *kannapes*; *Slavonic*, *konopi*; *Erse*, *canaib*; *Scaninavian*, *hampr*; *Swedish*, *hampa*; *German*, *hauf*; *Anglo-Saxon*, *haenep*; and *English*, *hemp*. In India other names are applied, indicative of its intoxicating or narcotic powers; thus, according to Dr. Royle, it is called the "increaser of pleasure," the "exciter of desire," the "cementer of friendship," the "causer of the reeling gait," the "laughter mover," & c.; and he also suggests that it may have been the *nepenthes* ("assuager of grief") of Homer, given by Helen to Telemachus.

The intoxicating properties of hemp reside in a peculiar resinous extract naturally secreted by the plant when growing in a hot climate. So remarkable is this peculiarity, that botanists until lately insisted upon the hemp of India being a distinct species (*C. indica*). It is now, however, decided that there is really no specific difference, the change being simply climatal. The secretion is deposited by exudation upon the surface of the leaves, the slender branches, and the flowers.

According to Dr. O'Shaughnessy, it is collected during the hot season by men clad in leathern dresses, who rush with violence through the hemp fields; the resin adheres to their dresses, from which it is scraped off and kneaded into lumps which have the appearance of pieces of linseed oil cake in colour and texture, and a peculiar and by no means agreeable smell.

In this state it is called "churrus;" and there are evidently several varieties of the substance, as Dr. Pereira describes it as being "in masses of the shape and size of a hen's egg, or of a small lemon, and formed by the adhesion of superimposed elongated pieces. It has dull grayish-brown colour, and not much odour;" whereas one specimen in the writer's collection differs in being in large shapeless fragments of the colour of amber, with the loose friable texture of linseed cake, and a heavy unpleasant odour. Another specimen has a resinous lustre, a dark brown colour, and is formed into an elongated oval shape, but not larger than half a hen's egg.

This is almost odourless, and is probably the *momeea* or *waxen churrus*, said to be collected with great care by the hand, and to be highly prized. The dried plant after it has flowered, and from which the churrus has not been removed, is compressed into bundles of twenty-four plants each, and is sold in the bazaars of India under the name of gunjah. The larger leaves and capsules, without the stalks, are also compressed into irregular sized masses, which receive the names of bang, subjee, or sidhee, in India.

The hashish of the Arabians consists of the tops of the small branchlets after inflorescence, carefully gathered and dried. Both this and the two previously mentioned preparations are extensively used for smoking and chewing—the gunjah and bang in India and Persis, and the hashish in Africa. When the bushmen of Southern Africa were brought to England, they passed much of their time in smoking this narcotic in pipes made of the long teeth of alligators, hollowed out for the purpose. Its use as a means of intoxication is said to have given rise to our word assassin, from the fact that the low Saracen soldiery, called hashashins, when intoxicated with hashish, were sent into the camps of the crusaders for the purpose of killing whomsoever they met, the drug rendering them quite regardless of the consequences.

The physiological effects of the various preparations above mentioned are most remarkable, and are unlike every other narcotic at present known. It produces inebriation and delirium of decidedly hilarious character, inducing violent laughter, jumping and dancing. The writer several times witnessed its effects upon the bushmen. After inhaling the smoke for some time they rose and began a very slow dance, which was gradually quickened until they became perfectly frenzied, and finally fell down in a state of complete insensiblity, from which they were a considerable time in recovering. Dr. O'Shaughnessy relates some most remarkable effects of the churrus, particularly its power in producing a state of true catalepsy. The same effects do not appear to take place upon Europeans, but this point has not yet been fairly tried, as the drug evidently suffers some change in its transmission by sea.

But it is not as a narcotic and excitant that the hemp plant is most useful to mankind; it is as an advancer rather than a retarder of civilization, that its utility is made most manifest. Its great value as a textile material, particularly for cordage and canvas, has made it eminently useful; and if we were to copy the figurative style of the Sanscrit writers, we might with justice call it the "accelerator of commerce," and the "spreader of wealth and intellect." for ages man has been dependent upon hempen cordage and hempen sails for enabling his ships to cross the seas; and in this respect it still occupies a most important place in our commercial affairs.

For its valuable fibre hemp is very largely cultivated in Europe, but chiefly in Russia and Russian Poland. It undergoes the same process for decomposing the parts of the stem as that described in the article on FLAX, called water-retting, by which the cellular tissue of the bark and medulla is destroyed, and the long fibres of the woody part are set free. This is not done by simply soaking in the waters of ponds and streams, for it requires to be dried both previously and subsequently to the retting process; after which it is beaten with wooden beetles or mallets, or by an apparatus called a break or brake worked by a treddle. Sometimes, however, this laborious operation is effected by water or steam-power.

Some of the finer kinds of hemp are more carefully prepared; the seed is sown broadcast instead of in drills, by which the stems are grown more slender and the fibres finer; and after the water-retting each stem is taken in the hand, and the epidermis is stripped or peeled off, and the reed or boon is then submitted as before mentioned to the *breaking* process.

In both cases after *breaking* the stalks are conveyed to the *scutching-mills*, where the separation of the fibres is still further effected by rubbing and striking, after which it is heckled or hackled—the heckler taking as much as he can conveniently hold and drawing it through a number of iron spikes fixed in a board forming a kind of comb.

The process called dew-retting, described in the article on FLAX, is also adopted for very fine varieties of hemp, such as the white crown Marienburg, and the Italian garden hemp; and in Russia and Sweden another method called snow-retting is used. After the first fall of snow the hemp which has been put up in stacks is spread out over the snow, and left to be buried by successive falls. It thus remains covered until the snow disappears, and is then sufficiently retted.

We have hitherto received the largest quantity of hemp from Russia—St Petersburg, Memel, and Riga being the chief ports of shipment; but the late war, which put a stop to the supply from this source, is likely to produce a beneficial result to our colonies.

The indefatigable exertions of Dr. Royle on behalf of the Indian government have led to the knowledge of various fibrous substances which are produced in the greatest abundance in our Indian empire, in the manufacture of cordage and canvas; so that having been forced into a knowledge of our own resources, it is not probable we shall ever be so dependent upon Russia in future for this necessary article.

The best substitute appears to be the Caloee or Rheea fibre produced by a plant of the nettle tribe (Urticaccae), Boehmeria nivea. The Rheea fibre can, it is expected, be produced very much cheaper than Russian hemp, and it is nearly twice as strong. Hitherto hemp has had one great advantage over all other fibres in the manufacture of cordage, and it remains to be seen whether the Rheea fibre has this qualification.

When a hempen rope is worn out, if it has not been tarred, it is valuable for making paper; and if it has been tarred, it is even more useful for oakum. This is not the case certainly with the fine ropes of Manilla hemp (Musa textilis), which, though stronger than the best Russian hemp, are almost useless when worn out.

The same may be said of the admirable coir ropes now so extensively used for ship's hawsers and other corage exposed to water. These ropes are made of the fibres from the husk of the common cocoa-nut.

The fibre called New Zealand flax, which is procured from the long sword-shaped leaves of Phormium tenax, a liliaceous plant, has been much recommended of late; but whether from the difficulty of preparing it, or from the inadequacy of the supply, it has not yet become a regular article of commerce. The epidermis of its leaves is more compact and harder than that of the stalks of the plants previously mentioned, and this may cause great difficulty both in retting and scutching.

We import hemp from Russia, Italy, Holland, Turkey, the East Indies, and latterly from the United States. That from America, however, is of inferior quality and blackish colour.

The East Indian hemp is coarse, and is in small hanks plaited about the thickness of a man's arm. The Italian hemp is very fine, that variety called garden-hemp being the longest of any kind; its superiority is supposed to be the result of spade culture in very suitable soil. It is also as white and soft as the finest white Russian.

Of the Russian kinds the St Petersburg clean and the Riga rein (or clean) are the best for general purposes. The variety called white crown Marienburg is remarkably short, white and soft; it is only fit for fine canvas.

The quantity of hemp imported into the United Kingdom was-

From Russia	*From other countries*
In 1851....33,229	tons In 1851....31,441 tons
In 1852....26,857	tons In 1852....26,551 tons
In 1853....40,320	tons In 1853....20,619 tons
In 1854....1,044	tons In 1854....35,927 tons
In 1855.... nil.	In 1855....28,010 tons

The price of Russian hemp has ranged from L38 to L90 (L=pound) per ton during the last five years, the maximum price being caused by the war. Considerable quantities are also raised in England and Ireland.

Of the figures just given those relating to Russia may be depended upon, but those referring to the imports from other countries are by no means satisfactory; for owing to the slovenly manner in which our commercial statistics are collected by the government, all articles which bear the trade name of hemp are included, such as Manilla hemp, and very often even jute.

There is one other useful quality in the hemp plant; it produces an abundance of seed, which not only yields a valuable oil, but the seed is extensively used in feeding singing birds. As the hemp is diaecious, only about one half the plants produce seeds; but these yield it in such abundance that an acre will yield from three to four quarters at about 40s. per quarter. As this is independent of the fibre produced it is a profitable crop in countries like Russia where the land is not too valuable.

For fuller information upon the subject consult Dr Royle's Illustrations of the Botany of the Himalayan Mountains, and his Fibrous Plants of India; Dr. O'Shaughnessy on the Preparation of the Indian Hemp or Gunjah; and the erudite work Textrinum Antiquorum, by James Yates, Esq., M.A. (T.C.A.)

I.

IGNATIUS BEANS

Botanical: Strychnos Ignatii (BERG.)

Family: N.O. Loganiaceae.

Synonyms: Faba Ignatic. Ignatia amara (Linn.).

Part Used: Ripe dried seeds.

Habitat: Philippine Islands.

Introduction

A large woody climbing shrub, introduced into Cochin China, and highly esteemed there as a medicine. It attracted the attention of the Jesuits, hence its name. In commerce the beans are about one full inch long; ovate, a dull blacky brown colour, very hard and horny, covered in patches with silvery adpressed hairs; endosperm translucent, enclosing an irregular cavity with an oblong embryo; no odour; taste extremely bitter. Each fruit contains about twelve to twenty seeds embedded in the pulp from which they have to be separated.

Constituents

The beans have the same properties as Nux Vomica, but contain more strychnine, also brucine, a volatile principle extractive, gum, resin, colouring matter, a fixed oil, and bassorin; they contain no albumen or starch.

Medicinal Action and Uses

Tonic and stimulant in action like Nux Vomica, which, being cheaper, is nearly always used as a substitute. Old writers lauded these beans as a remedy against cholera. They are useful in certain forms of heart trouble, but must be used with the greatest caution, as they are a very active and powerful poison.

Antidotes

Same as for strychnine, chloroform, belladonna, aconite, tobacco, chloral hydrate 1 drachm doses, morphia.

Preparations and Dosages

Tincture of Ignatia, 5 to 20 minims. Alkaline Tincture of Ignatia (syn. Goute Ameres de Beaume), 5 to 20 minims.

IVY, POISON

Botanical: Rhus Toxicodendron (LINN.)

Family: N.O. Anacardiaceae

Synonyms: Poison Oak. Poison Vine.

Part Used: Leaves.

Habitat: The American Poison Ivy is one of the species of Sumachs, an attractive group of plants widely distributed in Europe, Asia and North America, varying much in habit from low bushes to moderately-sized trees, and many of them familiar denizens of our gardens, for the sake of their ornamental foliage, which mostly assume beautiful tints in autumn, some of the varieties also bearing showy fruits. It grows in thickets and low grounds in North America, where it is quite common.

Its sap is of an extremely poisonous character, and in many persons the slightest contact with the leaves causes a rash of a most distressing character, the hands and arms and sometimes the whole body becoming greatly swollen from simply touching or carrying a branch of the plant, the swelling being accompanied with intolerable pain and inflammation, ending in ulceration. Some persons however, are able to handle the plant with impunity.

It has been sometimes known as *Ampelopsis Hoggii*, and under this name has occasionally been introduced with other climbers, but it has nothing to do with the group of Vines known under the name of *Ampelopsis*, and its presence in our gardens should be avoided.

Introduction

The root is reddish and branching; the leaves rather large, three parted (which will readily distinguish it from the five-parted *Ampelopsis*). The central leaflet has a longer stalk, the lateral ones are almost stalkless.

The leaflets are entire when young, but when full-grown they are variously indented, downy beneath, thin and about 4 inches long. They abound with an acrid juice, which darkens when exposed to air, and when applied to the skin produces the inflammation and swelling referred to.

When dry, the leaves are papery and brittle, sometimes with black spots of exuded juice turned black on drying. The flowers are in loose, slender clusters or panicles, in the axils of the leaves and are small, some perfect, others unisexual, and are greenish or yellowish-white in colour.

They blossom in June, and are followed by clusters of small, globular, duncoloured, berry-like fruit. There are almost as many antidotes for the inflammation caused by Poison Ivy as for the bites of the rattlesnake. Alkaline lotions, especially carbonate of soda, alum and hyposulphite of soda, are all recommended, and the patient is advised to moisten the skin constantly with the agent in solution. A hot solution of potassium permanganate applied locally is also recommended as a cure, also solutions of lead and ammonia. Rhus venenata has similar poisonous qualities.

Part Used Medicinally

The fresh leaves, from which a fluid extract is prepared.

Constituents

The activity of the drug was formerly ascribed to a fixed oil, Toxicodendrol, but has been attributed more recently to a yellow resin, to which the name Toxicodendrin is applied.

Medicinal Action and Uses

Irritant, rubefacient, stimulant, narcotic.

R. Toxicodendron was introduced into England first in 1640, but not used as a medicine till 1798, when Du Fressoy, a physician at Valenciennes, had brought to his notice a young man, who had been cured of a herpetic eruption on his wrist of six years' standing on being accidentally poisoned by this plant.

He thereupon commenced the use of the plant in the treatment of obstinate herpetic eruptions and in palsy, many cases yielding well to the drug.

Since then it has rapidly gained a place in general practice, meeting with some success in the treatment of paralysis, acute rheumatism and articular stiffness, and in various forms of chronic and obstinate eruptive diseases.

It is not official in the British Pharmacopoeia, but was formerly official in the United States

Pharmacopceia. It is in extensive use by homoeopathists for rheumatism, ringworm and other skin disorders, and is considered by them one of the most useful remedies in a great majority of cases of Nettlerash, especially if caused by some natural predisposition of constitution, in which the eruption is due to the use of some particular food.

The fluid extract, prepared from the fresh leaves, is mostly given in the form of a tincture, in doses of 5 to 30 drops. In small doses it is an excellent sedative to the nervous system, but must be given with care, as internally it may cause gastric intestinal irritation, drowsiness, stupor and delirium.

It has been recommended in cases of incontinence of urine. For this, the bark of the root of R. aromatica is also employed very successfully, an infusion of 1 OZ. to a pint of boiling water being taken in wineglassful doses.

The fluid extract of R. Toxicodendron can be used as a vesicant or blister producer, like cantharides, mezeron, and oil of Mustard. The best preparation is a concentrated alcoholic tincture made from the green plant in the strength of 1 in 4. The dose of 25 percent tincture is given in 1 to 5 drops three times a day.

A solid extract is not used owing to the extreme volatility of the active principles of the crude drug. Its milky juice is also used as an indelible ink for marking linen, and as an ingredient of liquid dressings or varnishes for finishing boots or shoes, though R. venenata is more extensively used for the latter purpose.

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LABURNUM

Botanical: Cytisus Laburnam (LINN.)

Family: N.O. Leguminosae, Constituents.

Synonym: Yellow Laburnurn.

Part Used: Seeds.

The Laburnum, indigenous to the higher mountains of Europe, is cultivated throughout the civilized world for its flowers, which appear early in the spring, in rich, pendent, yellow clusters.

All parts of the plant are probably poisonous and children should be warned never to touch the black seeds which contain this highly poisonous alkaloid, as cases of poisoning after eating the seeds have been frequent.

The Laburnum is a native of the mountains of France, Switzerland, and southern Germany, where it attains the height of 20 feet and upwards. It was introduced into England previously to 1597, at which time Gerard appears to have grown it in his garden under the names of Anagyris, Laburnum, and Bean Trefoil. The heart-wood is of a dark colour, and though of a coarse grain it is very hard and durable, will take a polish, and may be stained to resemble ebony. It is much in demand among turners, and is wrought into a variety of articles which require strength and smoothness.

Cytisus purpurascens (*Fr. C. d'Adam*), the PURPLE LABURNUM, is a hybrid between *C. Laburnum* and *C. purpureus*. It was originated in Paris in 1828, by M. Adam, and has since been much cultivated in England. A curious result of hybridizing appears in this variety occasionally. The branches below the graft produce the ordinary yellow Laburnum flowers of large size; those above often exhibit a small purple Laburnum flower, as well as reddish flowers intermediate between the two in size and colour. Occasionally, the same cluster has some flowers yellow and some purple (Balfour).

Laburnum trees should not be allowed to overhang a field used as a pasture, for when cattle and horses have browsed on the foliage and pods, the results have proved deadly. Symptoms of poisoning by Laburnum root or seeds are intense sleepiness, vomiting, convulsive movements, coma, slight frothing atthe mouth and unequally dilated pupils. In some cases, diarrhoea is very severe and at times the convulsions are markedly tetanic.

In an article on the use of insecticides against lice, by A. Bacot, Entomologist to the Lister Institute of Preventive Medicine, in the *British Medical Journal* of September 30, 1916, the writer records the results of experiments with various reputedly insecticidal substances, but mainly with Cytisine, the alkaloid obtained from the seeds of the Gorse and Laburnum, the physiological properties of which resemble those of Nicotine.

He found that while Cytisine is quite satisfactory from an experimental point of view, its use is contraindicated, because the degree of concentration required is such as to entail risk of absorption over a wide area of the body, with almost certain toxic consequences.

Constituents

Cytisine was discovered in 1863 by Husemann and Marme, as one of the poisonous alkaloids present in the seeds of the Laburnum. It is a white, crystalline solid, of a bitter, somewhat caustic taste, with a very poisonous action. It has been recommended in whooping cough and asthma.

The same alkaloid has been isolated from the seeds of several leguminous plants. Plugge, in 1895, stated that he found it in eight species of the genus *Cytisus*, two of the genus Genista, two of the genus *Sophara*, two of the genus *Baptisia*, in *Anagyris Joetida*, and in other plants. He considered the Ulexine of Gerrard from *Ulex Europaea* (Linn.) to be identical with Cytisine.

LARKSPUR, FIELD

Botanical: Delphinium Consolida.

Family: N.O. Ranunculacae.

Synonyms: Lark's Heel. Lark's Toe. Lark's Claw. Knight's Spur.

Part Used: Seed.

Habitat: Europe.

The Field Larkspur grows wild in cornfields throughout Europe. Though a doubtful native, it is found occasionally in England in considerable quantities in sandy or chalky cornfields, especially in Cambridgeshire.

Introduction

It is an annual, with upright, round stems a foot high or more, pubescent and divided into alternate, dividing branches. The leaves are alternate, the lower ones with petioles 1/2 inch long, the upper ones sessile, or nearly so. The plant closely resembles some of the species commonly cultivated in gardens. The flowers are in short racemes, pink, purple or blue, followed by glabrous follicles containing black, flattened seeds with acute edges and pitted surfaces. The seeds are poisonous, have an acrid and bitter taste, but are inodorous.

The active principle of the plant- Delphinine– is the same as in Stavesacre and is an irritant poison. Children should be warned against putting any part of this plant, or of its garden representatives, into their mouths. The seeds are especially dangerous, and cause vomiting and purging if eaten.

Medicinal Action and Uses

As in Stavesacre, the part used medicinally is the seed, a tincture of which in like manner acts as a parasiticide and insecticide, being used to destroy lice and nits in the hair. (During the Great War, when the men in the trenches took the trouble to use it, the results were said to be quite successful.—Editor.)

The tincture, given in 10-drop doses, gradually increased, is also employed in spasmodic asthma and dropsy.

The expressed juice of the leaves is considered good as an application to bleeding piles, and a conserve made of the flowers was formerly held to be an excellent medicine for children when subject to violent purging.

The juice of the flowers and an infusion of the whole plant was also prescribed against colic.

The expressed juice of the petals with the addition of a little alum makes a good blue ink. The name Delphinium, from *Delphin* (a dolphin), was given to this genus because the buds were held to resemble a dolphin. Shakespeare mentions the plant under the name of Lark's Heel.

The name Consolida refers to the plant's power of consolidating wounds.

LAUREL MOUNTAIN

Botanical: Kalmia latifolia (LINN.)

Family: N.O. Ericaceae.

Synonyms: Broad-leafed Laurel. Calico Bush. Spoon Wood. Ledum Floribus Bullates. Cistus Chamaerhodendros.

Part Used: Leaves.

Habitat: New Brunswick, Florida, Ohio, Louisiana, New Hampshire, Massachusetts, Alleghany Mountains.

Introduction

A beautiful evergreen shrub from 4 to 20 feet. When in full flower it forms dense thickets, the stems are always crooked, the bark rough. It was called Kalmia by Linnaeus in honour of Peter Kalm, a Swedish professor. The hard wood is used in the manufacture of various useful articles. Leaves ovate, lanceolate, acute on each end, on petioles 2 to 3 inches long.

Flowers numerous, delicately tinted a lovely shade of pink; these are very showy, clammy, interminal, viscid, pubescent, simple or compound heads, branches opposite, flowering in June and July.

The flowers yield a honey said to be deleterious. The leaves, shoots and berries are dangerous to cattle, and when eaten by Canadian pheasants communicate the poison to those who feed on the birds. The fruit is a dry capsule, seeds minute and numerous.

Constituents

Leaves possess narcotic poisoning properties and contain tannic acid, gum, fatty matter, chlorophyll, a substance resembling mannite, wax extractive, albumen, an acrid principle, Aglucosidearbutin, yellow calcium iron.

Medicinal Action and Uses

Indians are said to use the expressed juice of the leaves or a strong decoction of them to commit suicide. The leaves are the official part; powdered leaves are used as a local remedy in some forms of skin diseases, and are a most efficient agent in syphilis, fevers, jaundice, neuralgia and inflammation, but great care should be exercised in their use. Whisky is the best antidote to poisoning from this plant. An ointment for skin diseases is made by stewing the leaves in pure lard in an earthenware vessel in a hot oven. Taken internally it is a sedative and astringent in active haemorrhages, diarrhoea and flux. It has a splendid effect and will be found useful in overcoming obstinate chronic irritation of the mucous surface. In the lower animals an injection produces great salivation, lachrymation, emesis, convulsions and later paralysis of the extremities and laboured respiration. It is supposed, but not proved, that the poisonous principle of this plant is Andromedotoxin.

Preparations and Dosages

A saturated tincture of the leaves taken when plant is in flower, is the best form of administration, given in doses of 10 to 20 drops every two or three hours. Decoction, 1/2 to 1 fluid ounce of powdered leaves from 10 to 30 grains. Salve made from juice of the plant is an efficient local application for rheumatism.

Other Species

Kalmia augusfifolia (Sheep's Laurel or Lambkill, or Narrow-leaved Laurel, so called because it poisons sheep, which feed on its leaves), this species is said to be the best for medicinal use.

A decoction of its leaves, 1 OZ. to 1 quart of water reduced to a pint, is used by the negroes as a wash for ulcerations between the toes. A poisonous glucoside is found in the leaves of this species called asebotoxin, and also in *K. latifolia.*

K. Glauca, or Swamp Laurel, has similar properties.

LOVAGE, WATER

Botanical: Cenanthe fistulosa (LINN.)

Family: N.O. Umbelliferae.

Water Lovage is closely allied to Hemlock Water Dropwort (*Cenanthe crocata*, Linn.) and is by no means to be regarded as an edible plant.

All the species of Water Dropwort are regarded as poisonous, and the Hemlock Water Dropwort should not be allowed to grow in places where cattle are kept, as instances are numerous in which cows have been poisoned by eating the roots, and it is equally poisonous to horses.

The genus *Cenanthe* is scattered throughout the whole of the Northern Hemisphere, but are rare in America; some of them are to be met with in Britain, and certain of them are very poisonous. C. crocata has been used with beneficial effect in certain skin-diseases; also in the form of poultices to ulcers, etc., as well as for the purpose of poisoning rats and moles.

M

MESCAL BUTTONS

Botanical: Anhalonium Lewinii (HENN.)

Family: N.O. Cactaceae.

Synonyms: Lopophora Lewinii Pellote. Muscal Buttons. Anhalonium Williamsii. Echinocactus Lewinii. Echinocactus Williamsii.

Part Used: The tops, consisting of blunt leaves round a tuft of short, pale yellow hairs.

Habitat: Mexico.

Introduction

These South American Cacti, formerly regarded as belonging to the *Anhalonium* genus, by the name of which they are chiefly known, were later attributed to the genus *Echinocactus* of the *Mammalaria* species, being spineless and flexible.

The principal species of *Williamsii* and *Lewinii*, found in the Rio Grande valley, grow to a height of only 1/2 inch, and the tops, or Mescal Buttons, are from 1 to 1 1/2 inch across and 1/4 inch thick. When dry they are hard and brittle, but become soft when moistened. The taste and smell are peculiar, bitter and disagreeable.

The surface of *E. Lewinii*, or *Anhalonium Lewinii*, is crossed by thirteen irregular furrows, and that of *E. Williamsii* and *A. Williamsii* by eight regular ones. Small pink flowers are borne, but these do not appear in the drug. The Kiowa Indians have used Mescal Buttons from ancient times for producing exaltation in their religious ceremonies.

Constituents

Four alkaloids have been separated: Anhalonine, Mescaline, Anhalonidine, and Lophophorine, and two other bases, pellotine and anhalamine. Pellotine is said to be found only in the Williamsii variety, but this is always present in the commercial drug.

Medicinal Action and Uses

Cardiac, tonic, narcotic, emetic. The value of the drug in practice is uncertain, but it is stated to be useful in neurasthenia, hysteria, and asthma, and has been recommended in gout, neuralgia and rheumatism. Four to five buttons, or 215 to 230 grains of the drug will produce a strange cerebral excitement with visual disturbance, the visions being at first of varied beauty and later of gruesome shapes and monsters.

The physical effects include dilatation of the pupil, muscular relaxation, loss of time sense, partial anaesthesia, wakefulness, and sometimes nausea and vomiting. The mental symptoms in some ways resemble those of Indian Hemp.

Pellotine, in doses of 1/3 to 1 grain, has been used in hypodermic injection in cases of insanity, producing sleep without undesirable reactions. Care is needed, as collapse is said to have been observed after a dose of, 7/10 of a grain. The uses of the various alkaloids are in the experimental stage.

Dosage

Of the crude drug, 7 to 15 grains. Of fluid extract, 10 to 15 minims. Of 10 percent tincture, 1 to 2 teaspoonsful.

Other Species

There are also found in parcels of the tops specimens of *Mammalaria fissuratus, M. retusus,* and *A. jourdanianum.*

Mescal is a name given in Mexico to a liquor distilled from a number of species of Agave.

N

NIGHTSHADE, BLACK

Botanical: Solanum nigrum (LINN.)

Family: N.O. Solanaceae.

Synonyms: Garden Nightshade. Petty Morel.

Parts Used: Whole plant, fresh leaves.

The Black Nightshade is an annual plant, common and generally distributed in the South of England, less abundant in the North and somewhat infrequent in Scotland. It is one of the most cosmopolitan of wild plants, extending almost over the whole globe.

In this country, it is frequently to be seen by the wayside and is often found on rubbish heaps, but also among growing crops and in damp and shady places. It is sometimes called the Garden Nightshade, because it so often occurs in cultivated ground.

Introduction

It rarely grows more than a foot or so in height and is much branched, generally making a bushy-looking mass. It varies much according to the conditions of its growth, both as to the amount of its dull green foliage and the size of its individual leaves, which are egg-shaped and stalked, the outlines bluntly notched or waved. The stem is green and hollow. The flowers are arranged in clusters at the end of stalks springing from the main stems at the intervals between the leaves, not, as in the Bittersweet, opposite the leaves. They are small and white, resembling those of Bittersweet in form, and are succeeded by small round berries, green at first, but black when ripe.

The plant flowers and fruits freely, and in the autumn the masses of black berries are very noticeable; they have, when mature, a very polished surface. On account of its berries, the Black Nightshade was called by older herbalists 'Petty Morel,' to distinguish it from the Deadly Nightshade, often known as Great Morel. Culpeper says: 'Do not mistake the deadly nightshade for this,' cautiously adding, 'if you know it not, you may then let them both alone.'

In the fourteenth century, we hear of the plant under the name of Petty Morel being used for canker and with Horehound and wine taken for dropsy.

Part Used

The whole plant, gathered in early autumn, when in both flower and fruit and dried. Also the fresh leaves. When the plant grows at all in a bunchy mass, strip off the stems singly and dry them under the same conditions as given above for Belladonna leaves, tying several stems together in a bunch, however, spread out fanwise for the air to penetrate to all parts, and hang the bunches over strings, rather than in trays. The bunches should be of uniform size.

Medicinal Action and Uses

This species has the reputation of being very poisonous, a fact, however, disputed by recent inquiries. In experimenting on dogs, very varying results have been obtained, which may be explained by the fact that the active principle, Solanine, on which the poisonous properties of this and the preceding species depend, and which exists in considerable quantity in the fresh herb, varies very much at different seasons.

The berries are injurious to children, but are often eaten by adults with impunity, especially when quite ripe, as the poisonous principle is chiefly associated with all green parts. Cattle will not eat the plant and sheep rarely touch it.

It is applied in medicine similarly to Bittersweet, but is more powerful and possesses greater narcotic properties.

According to Withering and other authorities, 1 or 2 grains of the dried leaves, infused in boiling water, act as a strong sudorific.

In Bohemia the leaves are placed in the cradles of infants to promote sleep. In the islands of Bourbon and Mauritius, the leaves are eaten in place of spinach: and the fruit is said to be eaten without inconvenience by soldiers stationed in British Kaffraria. (*Lindley's Treasury of Botany*.)

It has been found useful in cutaneous disorders, but its action is variable, and it is considered a somewhat dangerous remedy except in very small doses. The bruised fresh leaves, used externally, are said to ease pain and abate inflammation, and the Arabs apply them to burns and ulcers. Their juice has been used for ringworm, gout and earache, and mixed with vinegar, is said to be good as a gargle and mouthwash. Besides the above-mentioned species, others are used for medicinal, alimentary, and other purposes. Some are employed almost universally as narcotics to allay pain, etc.; others are sudorific and purgative. *Solanum toxicarium* is used as a poison by the natives of Cayenne. *S. pseudo-quina* is esteemed as a valuable febrifuge in Brazil. Among those used for food, are *S. Album and S. Aethiopicum*, the fruits of which are used in China and Japan.

Those of *S. Anguivi* are eaten in Madagascar. *S. esculentum* and its varieties furnish the fruits known as Aubergines or Brinjals, which are highly esteemed in France, and may sometimes be met with in English markets; they are of the size and form of a goose's egg and usually of a rich purple colour. The Egg–plant, which has white berries, is only a variety of this.

The Peruvians eat the fruits of *S. muricatum* and *S. quitoense*; those of *S. ramosum* are eaten as a vegetable in the West Indies. The Tasmanian Kangaroo Apple is the fruit of *S. laciniatum*; unless fully ripe this is said to be acrid. In Gippsland, Australia, the natives eat the fruits of *S. vescum*, which, like the preceding, is not agreeable till fully ripe, when it is said to resemble in form and flavour the fruits of Physalis peruviana. Of other species the leaves are eaten; as those of *S. oleraceum* in the West Indies and Fiji Islands, of S. sessiflorum in Brazil, etc.

Other species are used as dyes. *S. indigoferum*, in Brazil, cultivated for indigo. The juice of the fruit of *S. gnaphalioides* is said to be used to tint the cheeks of the Peruvian ladies, while their sisters of the Canary Isles employ similarly the fruits of *S. vespertilia*. The fruits of S. saponaceum are used in Peru to whiten linen in place of soap. *S. marginatum* is used in Abyssinia for tanning leather.

NIGHTSHADE, DEADLY

Botanical: Atropa belladonna (LINN.)

Family: N.O. Solanaceae.

Synonyms: Belladonna. Devil's Cherries. Naughty Man's Cherries. Divale. Black Cherry. Devil's Herb. Great Morel. Dwayberry.

Parts Used: Root, leaves, tops.

Habitat: Widely distributed over Central and Southern Europe, South-west Asia and Algeria; cultivated in England, France and North America.

Though widely distributed over Central and Southern Europe, the plant is not common in England, and has become rarer of late years. Although chiefly a native of the southern counties, being almost confined to calcareous soils, it has been sparingly found in twenty-eight British counties, mostly in waste places, quarries and near old ruins. In Scotland it is rare.

Under the shade of trees, on wooded hills, on chalk or limestone, it will grow most luxuriantly, forming bushy plants several feet high, but specimens growing in places exposed to the sun are apt to be dwarfed, consequently it rarely attains such a large size when cultivated in the open, and is more subject to the attacks of insects than when growing wild under natural conditions.

Introduction

The root is thick, fleshy and whitish, about 6 inches long, or more, and branching. It is perennial. The purplish coloured stem is annual and herbaceous. It is stout, 2 to 4 feet high, undivided at the base, but dividing a little above the ground into three—more rarely two or four branches, each of which again branches freely.

The leaves are dull, darkish green in colour and of unequal size, 3 to 10 inches long, the lower leaves solitary, the upper ones in pairs alternately from opposite sides of the stem, one leaf of each pair much larger than the other, oval in shape, acute at the apex, entire and attenuated into short petioles.

First-year plants grow only about 1 1/2 feet in height. Their leaves are often larger than in full-grown plants and grow on the stem immediately above the ground. Older plants attain a height of 3 to 5 feet, occasionally even 6 feet, the leaves growing about 1 to 2 feet from the ground.

The whole plant is glabrous, or nearly so, though soft, downy hairs may occur on the young stems and the leaves when quite young. The veins of the leaves are prominent on the under surface, especially the midrib, which is depressed on the upper surface of the leaf.

The fresh plant, when crushed, exhales a disagreeable odour, almost disappearing on drying, and the leaves have a bitter taste, when both fresh and dry.

The flowers, which appear in June and July, singly, in the axils of the leaves, and continue blooming until early September, are of a dark and dingy purplish colour, tinged with green, large (about an inch long), pendent, bell-shaped, furrowed, the corolla with five large teeth or lobes, slightly reflexed. The five-cleft calyx spreads round the base of the smooth berry, which ripens in September, when it acquires a shining black colour and is in size like a small cherry. It contains several seeds.

The berries are full of a dark, inky juice, and are intensely sweet, and their attraction to children on that account, has from their poisonous properties, been attended with fatal results. Lyte urges growers 'to be carefull to see to it and to close it in, that no body enter into the place where it groweth, that will be enticed with the beautie of the fruite to eate thereof.'

And Gerard, writing twenty years later, after recounting three cases of poisoning from eating the berries, exhorts us to 'banish therefore these pernicious plants out of your gardens and all places neare to your houses where children do resort.' In September, 1916, three children were admitted to a London hospital suffering from Belladonna poisoning, caused, it was ascertained, from having eaten berries from large fruiting plants of *Atropa Belladonna* growing in a neighbouring public garden, the gardener being unaware of their dangerous nature, and again in 1921 the Norwich Coroner, commenting on the death of a child from the same cause, said that he had four not dissimilar cases previously.

It is said that when taken by accident, the poisonous effects of Belladonna berries may be prevented by swallowing as soon as possible an emetic, such as a large glass of warm vinegar or mustard and water. In undoubted cases of this poisoning, emetics and the stomach-pump are resorted to at once, followed by a dose of magnesia, stimulants and strong coffee, the patient being kept very warm and artificial respiration being applied if necessary. A peculiar symptom in those poisoned by Belladonna is the complete loss of voice, together with frequent bending forward of the trunk and continual movements of the hands and fingers, the pupils of the eye becoming much dilated.

History

The plant in Chaucer's days was known as Dwale, which Dr. J. A. H. Murray considers was probably derived from the Scandinavian *dool*, meaning delay or sleep. Other authorities have derived the word from the French *deuil* (grief), a reference to its fatal properties.

Its deadly character is due to the presence of an alkaloid, Atropine, 1/10 grain of which swallowed by a man has occasioned symptoms of poisoning. As every part of the plant is extremely poisonous, neither leaves, berries, nor root should be handled if there are any cuts or abrasions on the hands. The root is the most poisonous, the leaves and flowers less so, and the berries, except to children, least of all.

It is said that an adult may eat two or three berries without injury, but dangerous symptoms appear if more are taken, and it is wiser not to attempt the experiment. Though so powerful in its action on the human body, the plant seems to affect some of the lower animals but little.

Eight pounds of the herb are said to have been eaten by a horse without causing any injury, and an ass swallowed 1 lb. of the ripe berries without any bad results following. Rabbits, sheep, goats and swine eat the leaves with impunity, and birds often eat the seeds without any apparent effect, but cats and dogs are very susceptible to the poison. Belladonna is supposed to have been the plant that poisoned the troops of Marcus

Antonius during the Parthian wars. Plutarch gives a graphic account of the strange effects that followed its use.

Buchanan relates in his *History of Scotland* (1582) a tradition that when Duncan I was King of Scotland, the soldiers of Macbeth poisoned a whole army of invading Danes by a liquor mixed with an infusion of Dwale supplied to them during a truce. Suspecting nothing, the invaders drank deeply and were easily overpowered and murdered in their sleep by the Scots.

According to old legends, the plant belongs to the devil who goes about trimming and tending it in his leisure, and can only be diverted from its care on one night in the year, that is on Walpurgis, when he is preparing for the witches' sabbath.

The apples of Sodom are held to be related to this plant, and the name Belladonna is said to record an old superstition that at certain times it takes the form of an enchantress of exceeding loveliness, whom it is dangerous to look upon, though a more generally accepted view is that the name was bestowed on it because its juice was used by the Italian ladies to give their eyes greater brilliancy, the smallest quantity having the effect of dilating the pupils of the eye.

Another derivation is founded on the old tradition that the priests used to drink an infusion before they worshipped and invoked the aid of Bellona, the Goddess of War.

The generic name of the plant, *Atropa*, is derived from the Greek *Atropos*, one of the Fates who held the shears to cut the thread of human life—a reference to its deadly, poisonous nature.

Thomas Lupton (1585) says: 'Dwale makes one to sleep while he is cut or burnt by cauterizing.' Gerard (1597) calls the plant the Sleeping Nightshade, and says the leaves moistened in wine vinegar and laid on the head induce sleep.

Mandrake, a foreign species of *Atropa* (*A. Mandragora*), was used in Pliny's day as an anaesthetic for operations. Its root contains an alkaloid, Mandragorine. The sleeping potion of Juliet was a preparation from this plant—perhaps also the Mandrake wine of the Ancients. It was called Circaeon, being the wine of Circe.

Belladonna is often confused in the public mind with dulcamara (Bittersweet), possibly because it bears the popular name of woody nightshade.

The cultivation of Belladonna in England dates at least from the sixteenth century, for Lyte says, in the Niewe Herball, 1578: 'This herbe is found in some places of this Countrie, in woods and hedges and in the gardens of some Herboristes.' Though not, however, much cultivated, it was evidently growing wild in many parts of the country when our great Herbals were written. Gerard mentions it as freely growing at Highgate, also at Wisbech and in Lincolnshire, and it gave a name to a Lancashire valley.

Under the name of *Solanum* lethale, the plant was included in our early Pharmacopoeias, but it was dropped in 1788 and reintroduced in 1809 as *Belladonna folia*. Gerard was the first English writer to adopt the Italian name, of which he makes two words. The root was not used in medicine here until 1860, when Peter Squire recommended it as the basis of an anodyne liniment.

Before the War, the bulk of the world's supply of Belladonna was derived from plants growing wild on waste, stony places in Southern Europe. The industry was an important one in Croatia and Slavonia in South Hungary, the chief centre for foreign Belladonna, the annual crop in those provinces having been estimated at 60 to 100 tons of dry leaves and 150 to 200 tons of dry root. In 1908 the largest exporter in Slavonia is said to have sent out 29,880 lb. of dry Belladonna root.

The Balkan War of 1912–13 interrupted the continuity of Belladonna exports from South Hungary. Stocks of roots and leaves made shorter supplies last out until 1914, when prices rose, owing to increasing scarcity roots which realized 45s. per cwt. in January, 1914, selling for 65s. in June, 1914. With the outbreak of the Great War and the consequent entire stoppage of supplies, the price immediately rose to 100s. per cwt., and soon after, from 300s. to 480s. per cwt. or more.

The dried leaves, from abroad, which in normal times sold at 45s. to 50s. per cwt., rose to 250s. to 350s. or more, per cwt. In August, 1916, the drug Atropine derived from the plant had risen from 10s. 6d. per oz. before the War to L. 7 (pounds sterling) per OZ.

Cultivation

Belladonna herb and root are sold by analysis, the value depending upon the percentage of alkaloid contained. A wide variation occurs in the amount of alkaloid present. It is important, therefore, to grow the crop under such conditions of soil and temperature as are likely to develop the highest percentage of the active principle.

In connexion with specimens of the wild plant, it is most difficult to trace the conditions which determine the variations, but it has been ascertained that a light, permeable and chalky soil is the most suitable for this crop. This, joined to a south-west aspect on the slope of a hill, gives specially good results as regards a high percentage of alkaloids. The limits of growth of Belladonna are between 50 degrees and 55 degrees N. Lat. and an altitude of 300 to 600 feet, though it may descend to sea level where the soil is calcareous, especially where the drainage is good and the necessary amount of shade is found. The question of suitability of soil is especially important. Although the cultivated plant contains less alkaloid than that which grows wild, this in reality is only true of plants transported to a soil unsuited to them. It has been found, on the contrary, that artificial aids, such as the judicious selection of manure, the cleansing and preparation of the soil, destruction of weeds, etc., in accordance with the latest scientific practice, have improved the plants in every respect, not only in bulk, but even in percentage weight of alkaloidal contents.

Authorities differ on the question of manuring. Some English growers manure little if the plants are strong, but if the soil is really poor, or the plants are weak, the crop may be appreciably increased by the use of farmyard manure, or a mixture of nitrate of soda, basic slag and kainit. Excellent results have been obtained in experiments, by treating with basic slag, a soil already slightly manured and naturally suited to the plant, the percentage of total alkaloid in dry leaf and stem from third-year plants amounting to 0.84. In this case, the season was, however, an exceptionally favourable one, and, moreover, the soil being naturally suited to the plant, the percentage of alkaloid obtained without added fertilizer was already high. Speaking from the writer's own experience, Belladonna grows in her garden at Chalfont St. Peter. The soil is gravelly even stony in some parts, with a chalk subsoil—the conditions similar to those that the plant enjoys in its wild state. This neighbourhood, in her opinion, is a suitable one for growing fields of Belladonna as crops for medicinal purposes.

Notes and statistics taken from season to season, extending over nine years, have shown that atmospheric conditions have a marked influence on the alkaloidal contents of Belladonna, the highest percentage of alkaloid being yielded in plants grown in sunny and dry seasons. The highest percentage of alkaloid, viz. 0.68 percent, was obtained from the Belladonna crop of 1912, a year in which the months May and June were unusually dry and sunny; the lowest, just half, 0.34 was obtained on the same ground in 1907, when the period May and June was particularly lacking in sunshine. In 1905, August and September proving a very wet season, specimens analysed showed the low percentages of 0.38 and 0.35, whereas in July and October, 1906, the intervening period being very fine and dry, specimens analysed in those months showed a percentage of 0.54 and 0.64 respectively.

There appears to be no marked variation in alkaloidal contents due to different stages of growth from June to September, except when the plant begins to fade, when there is rapid loss, hence the leaves may be gathered any time from June until the fading of the leaves and shoots set in.

In sowing Belladonna seed, 2 to 3 lb. should be reckoned to the acre. Autumn sown seeds do not always germinate, it is therefore more satisfactory to sow in boxes in a cool house, or frame, in early March, soaking the soil in the seed-boxes first, with boiling water, or baking it in an oven, to destroy the embryo of a small snail which is apt, as well as slugs and various insects, to attack the seedlings later. Pieces of chalk or lime can be placed among the drainage rubble at the bottom of the boxes. Belladonna seed is very slow in germinating, taking four to six weeks, or even longer, and as a rule not more than 70 percent can be relied on to germinate.

On account of the seeds being so prone to attack by insect pests, if sown in the open, the seed-beds should first be prepared carefully. First of all, rubbish should be burnt on the ground, the soil earthed up and fired all over, all sorts of burnt vegetable rubbish being worked in. Then thoroughly stir up the ground and leave it rough for a few days so that air and sun permeate it well. Then level and rake the bed fine and finally give it a thorough drenching with boiling water. Let it stand till dry and friable, add sharp grit sand on the surface, rake fine again and then sow the seed very thinly.

Considerable moisture is needed during germination. The seedlings should be ready for planting out in May, when there is no longer any fear of frost. They will then be about 1 1/2 inch high. Put them in after rain, or if the weather be dry, the ground should be well watered first, the seedlings puddled in and shaded from the sun with inverted flower-pots for several days. About 5,000 plants will be needed to the acre. If they are to remain where first planted, they may be planted 18 inches apart. A reserve of plants should be grown to fill in gaps.

The seedlings are liable to injury by late frosts and a light top dressing of farmyard manure or leaf-mould serves to preserve young shoots from injury during sudden and dangerous changes of temperature. They do best in shade. In America, difficulties in the cultivation of Belladonna have been overcome by interspersing plants with rows of scarlet runners, which, shading the herb, cause it to grow rapidly. Healthy young plants soon become re-established when transplanted, but require watering in dry weather. Great care must be taken to keep the crop clean from weeds and handpicking is to be recommended.

By September, the single stem will be 1 1/2 to 2 1/2 feet high. A gathering of leaves may then be made, if the plants are strong; 'leaves' include the broken-off tops of the plants, but the coarser stems are left on the plant and all discoloured portions rejected, and the plants should not be entirely denuded of leaves.

Before the approach of winter, plants must be thinned to 2 1/2 to 3 feet apart, or overcrowding will result in the second year, in which the plant will bear one or two strong stems.

The writer finds that the green tips and cuttings from side branches root well and easily in early summer, and that buds with a piece of the root attached can be taken off the bigger roots in April, this being a very successful way of rapid propagation to get big, strong plants.

In the second year, in June, the crop is cut a few inches above the ground, while flowering, and delivered to the wholesale buyer the same day it is cut.

The average crop of fresh herb in the second and third years is 5 to 6 tons per acre, and 5 tons of fresh leaves and tops yield 1 ton of dried herb. A second crop is obtained in September in good seasons.

The yield per acre in the first year of growth should average about 6 cwt. of dry leaves.

The greatest loss of plants is in wet winters. Young seedling plants unless protected by dead leaves during the winter often perish. On the lighter soils there is less danger from winter loss, but the plants are more liable to damage from drought in summer.

One of the principal insect pests that attack Belladonna leaves is the so-called 'fleabeetle.' It perforates the leaves to such an extent as to make them unfit for sale in a dried state. It is when the plants are exposed to too much sunlight in open spots that the attacks of the beetle are worst, its natural habitat being well-drained slopes, partly under trees.

If therefore the ground around the plants is covered with a thick mulch of leaves, they are not so likely to be attacked. The caterpillars from which the beetles come feed on the ground, and as they dislike moisture, the damp leaves keep them away. If napthalene is scattered on the soil, the vapour will probably help to keep the beetles off.

The only way to catch them is to spread greased sheets of paper below the plants, and whenever the plants are disturbed a number of beetles will jump off like fleas and be caught on the papers. This at best only lessens the total quantity, however, and the other methods of precaution are the best.

The plant is dug or ploughed up during the autumn in the fourth year and the root collected, washed and dried, 3 to 4 tons of fresh root yielding a little over 1 ton of dry root. In time of great scarcity, it would probably pay to dig the root in the third year.

Old roots must be replaced by a planting of young ones or offsets, and if wireworm is observed, soot should be dug in with replacements.

Although Belladonna is not a plant that can be successfully grown in every small garden, yet in a chalky garden a few plants might be grown in a shady corner for the sake of the seed, for which there is a demand for propagation.

Those, also, who know the haunts of the plant in its wild state might profitably collect the ripe berries, which should then be put into thin cotton bags and the juice squeezed out in running water. When the water is no longer stained, wring the bag well and turn out the seeds on to blotting paper and dry in the sun, or in a warm room near a stove. Sieve them finally, when dry, to remove all portions of the berry skin, etc.

Belladonna has been successfully cultivated in the neighbourhood of Leningrad since 1914, and already good crops have been obtained, the richness of the stems in alkaloids being noteworthy. It is stated that in consequence of the success that has attended the cultivation of Belladonna in Russia, it will no longer be needful to employ German drugs in the preparation of certain alkaloids. Much is also being collected wild in the Caucasus and in the Crimea. It is hoped that if sufficient stocks can be raised in Britain, not only will it be unnecessary to import Belladonna, but that it may be possible to export it to those of our Dominions where the climate and local conditions prevent its successful culture, though at present it is still included among the medicinal plants of which the exportation is forbidden.

The following note on the growth and cultivation of Belladonna is from the Chemist and Druggist, of February 26, 1921:

'Belladonna is a perennial, but for horticultural purposes it is treated as a biennial, or triennial plant. The root in 3 years has attained very large dimensions around Edinburgh; in fact, often so large as to make the lifting a very heavy, and therefore costly, matter, and in consequence 2 years' growth is quite sufficient. One-year-old roots are just as active as the three-year-old stocks, and to the grower it is merely a matter of expediency which crop he chooses to dig up. The aerial growth is very heavy, twoyear-old plants making 5 to 6 feet in the season if not cut for first crop, and if cut in July they make a second growth of 2 to 3 feet by September. To obtain a supply of seeds certain plantations must be left uncut, so as to get a crop of seeds for the next season. Moisture is, from a practical point of view, a very important matter. A sample, apparently dry to the touch, but not crisp, may have 15 percent to 20 percent of moisture present. Therefore if a pharmacist was to use a sample of such Belladonna leaves, although assayed to contain 0.03 percent of alkaloids, he would produce a weaker tincture than if he had used leaves with, say, only 5 percent of water present. The alkaloidal factor of this drug is the index to its value. Both the British and the United States Pharmacopoeias adopt the same standard of alkaloidal value for the leaves, but the British Pharmacopceia does not require a standard for the root, which is one of those subtle conundrums which this quaint book frequently presents! Plants grown in a hard climate, such as Scotland, give a good alkaloidal figure, which compares favourably with any others. For roots, the British Pharmacopoeia as just stated, requires no standard, but United States Pharmacopceia standard is 0.45 percent, and Scottish roots yielded 0.78 percent and 0.72 percent. There is not a great deal of alkaloidal value in the stalks. About 0.08 in the autumn.'

Constituents

The medicinal properties of Belladonna depend on the presence of Hyoscyamine and Atropine. The root is the basis of the principal preparations of Belladonna.

The total alkaloid present in the root varies between 0.4 and 0.6 percent, but as much as 1 percent has been found, consisting of Hyoscyamine and its isomer Atropine, 0.1 to 0.6 percent; Belladonnine and occasionally, Atropamine. Starch and Atrosin, a red colouring principle, are also present in the root. Scopolamine (hyoscine) is also found in traces, as is a fluorescent principle similar to that found in horse-chestnut bark and widely distributed through the natural order Solanaceae.

The greater portion of the alkaloidal matter consists of Hyoscyamine, and it is possible that any Atropine found is produced during extraction. The amount of alkaloids present in the leaves varies somewhat in wild or cultivated plants, and according to the methods of drying and storing adopted, as well as on the conditions of growth, soil, weather, etc. The proportion of the total alkaloid present in the dried leaves varies from 0.3 to 0.7 percent. The greater proportion consists of Hyoscyamine, the Atropine being produced during extraction, as in the root. Belladonnine and Apoatropine may also be formed during extraction from the drug. The leaves contain also a trace of Scopolamine, Atrosin and starch.

The British Pharmacopoeia directs that the leaves should not contain less than 0.3 percent of alkaloids and the root not less than 0.45 percent. A standardized liquid extract is prepared, from which the official plaster, alcoholic extract, liniment, suppository, tincture and ointment are made. The green extract is prepared from the fresh leaves.

Medicinal Action and Uses

Narcotic, diuretic, sedative, antispasmodic, mydriatic. Belladonna is a most valuable plant in the treatment of eye diseases, Atropine, obtained during extraction, being its most important constituent on account of its power of dilating the pupil. Atropine will have this effect in whatever way used, whether internally, or injected under the skin, but when dropped into the eye, a much smaller quantity suffices, the tiny discs oculists using for this purpose, before testing their patient's sight for glasses, being made of gelatine with 1/50000 grain of Atropine in each, the entire disk only weighing 1/50 grain. Scarcely any operation on the eye can safely be performed without the aid of this valuable drug. It is a strong poison, the amount given internally being very minute, 1/200 to 1/100 grain. As an antidote to Opium, Atropine may be injected subcutaneously, and it has also been used in poisoning by Calabar bean and in Chloroform poisoning. It has no action on the voluntary muscles, but the nerve endings in involuntary muscles are paralysed by large doses, the paralysis finally affecting the central nervous system, causing excitement and delirium.

The various preparations of Belladonna have many uses. Locally applied, it lessens irritability and pain, and is used as a lotion, plaster or liniment in cases of neuralgia, gout, rheumatism and sciatica. As a drug, it specially affects the brain and the bladder. It is used to check excessive secretions and to allay inflammation and to check the sweating of phthisis and other exhausting diseases.

Small doses allay cardiac palpitation, and the plaster is applied to the cardiac region for the same purpose, removing pain and distress. It is a powerful antispasmodic in intestinal colic and spasmodic asthma. Occasionally the leaves are employed as an ingredient of cigarettes for relieving the latter. It is well borne by children, and is given in large doses in whooping cough and false croup. For its action on the circulation, it is given in the collapse of pneumonia, typhoid fever and other acute diseases. It increases the rate of the heart by some 20 to 40 beats per minute, without diminishing its force.

It is of value in acute sore throat, and relieves local inflammation and congestion. Hahnemann proved that tincture of Belladonna given in very small doses will protect from the infection of scarlet fever, and at one time Belladonnna leaves were held to be curative of cancer, when applied externally as a poultice, either fresh or dried and powdered. Belladonna plasters are often applied, after a fall, to the injured or sprained part. A mixture of Belladonna plaster, Salicylic acid and Lead plaster is recommended as an application for corns and bunions.

Preparations and Dosages

Powdered leaves, 1 to 2 grains. Powdered root, 1 to 5 grains. Fluid extract leaves, 1 to 3 drops. Fluid extract root, B.P., 1/4 to 1 drop. Tincture, B.P., 5 to 15 drops. Alkaloid Atropine, Alcoholic extract, B.P., 1/4 to 1 grain. Green extract, B.P., 1/4 to 1 grain. Juice, B.P., 5 to 15 drops. Liniment, B.P. Plaster, B.P. and U.S.P. Ointment, B.P.

NUX VOMICA

Botanical: Strychnos Nux-vomica (LINN.)

Family: N.O. Loganiaceae.

Synonyms: Poison Nut. Semen strychnos. Quaker Buttons.

Part Used: Dried ripe seeds.

Habitat: India, in the Malay Archipelago.

Introduction

A medium-sized tree with a short, crooked, thick trunk, the wood is white hard, close grained, durable and the root very bitter. Branches irregular, covered with a smooth ash-coloured bark; young shoots deep green, shiny; leaves opposite, short stalked, oval, shiny, smooth on both sides, about 4 inches long and 3 broad; flowers small, greeny-white, funnel shape, in small terminal cymes, blooming in the cold season and having a disagreeable smell. Fruit about the size of a large apple with a smooth hard rind or shell which when ripe is a lovely orange colour, filled with a soft white jelly-like pulp containing five seeds covered with a soft woolly-like substance, white and horny internally. The seeds are removed when ripe, cleansed, dried and sorted; they are exported from Cochin, Madras and other Indian ports. The seeds have the shape of flattened disks densely covered with closely appressed satiny hairs, radiating from the centre of the flattened sides and giving to the seeds a characteristic sheen; they are very hard, with a dark grey horny endosperm in which the small embryo is embedded; no odour but a very bitter taste.

Constituents

Nux Vomica contains the alkaloids, Strychnine and Brucine, also traces of strychnicine, and a glucoside Loganin, about 3 percent fatty matter, caffeotannic acid and a trace of copper. The pulp of the fruit contains about 5 percent of loganin together with the alkaloid strychnicine.

Medicinal Action and Uses

The properties of Nux Vomica are substantially those of the alkaloid Strychnine. The powdered seeds are employed in atonic dyspepsia. The tincture of Nux Vomica is often used in mixtures—for its stimulant action on the gastro-intestinal tract. In the mouth it acts as a bitter, increasing appetite; it stimulates peristalsis, in chronic constipation due to atony of the bowel it is often combined with cascara and other laxatives with good effects. Strychnine, the chief alkaloid constituent of the seeds, also acts as a bitter, increasing the flow of gastric juice; it is rapidly absorbed as it reaches the intestines, after which it exerts its characteristic effects upon the central nervous system, the movements of respiration are deepened and quickened and the heart slowed through excitation of the vagal centre. The senses of smell, touch, hearing and vision are rendered more acute, it improves the pulse and raises blood pressure and is of great value as a tonic to the circulatory system in cardiac failure.

Strychnine is excreted very slowly and its action is cumulative in any but small doses; it is much used as a gastric tonic in dyspepsia. The most direct symptom caused by strychnine is violent convulsions due to a simultaneous stimulation of the motor or sensory ganglia of the spinal cord; during the convulsion there is great rise in blood pressure; in some types of chronic lead poisoning it is of great value.

In cases of surgical shock and cardiac failure large doses are given up to 1/10 grain by hypodermic injection; also used as an antidote in poisoning by chloral or chloroform. Brucine closely resembles strychnine in its action, but is slightly less poisonous, it paralyses the peripheral motor nerves. It is said that the convulsive action characteristic of strychnine is absent in brucine almost entirely. It is used in pruritis and as a local anodyne in inflammations of the external ear.

Preparations and Dosages

Strychnine should not be administered in liquid form combined with bromides, iodides or chlorides, there being a risk of formation of the insoluble hydrobromide, etc.

Nux Vomica, 1 to 4 grains. Extract of Nux Vomica, B.P., 1/4 to 1 grain. Extract of Nux

Vomica, B.P. 1885, 1/4 to 1 grain. Extract of Nux Vomica, U.S.P., 1/4 grain. Liquid extract of Nux Vomica, B.P., 1 to 3 minims. Fluid extract of Nux Vomica, U.S.P., 1 minim. Tincture of Nux Vomica, B.P., 5 to 15 minims. Tincture of Nux Vomica, B.P. 1885, 10 to 20 minims. Tincture of Nux Vornica, U.S.P., 10 minims. Strychnine, B.P., 1/6 to 1/15 grain. Hypodermic injection of strychnine. Solution of Strychnine Hydrochloride, B.P., 2 to 8 minims. Acid Strychnine Mixture, B.P.C., 1/2 to 1 fluid ounce.

Poisoning and Antidotes

In cases of poisoning by strychnine an emetic or the stomach pump should be used at once and tannin or potassium permanganate given to render the strychnine inactive. Violent convulsions should be controlled by administration of chloroform or large doses of chloral or bromide. Urethane in large doses is considered an antidote. Amyl nitrite is also useful owing to its rapid action during the convulsion, and in absence of respiration 3 to 5 minims may be hypodermically injected.

Other Species

Strychnos Tieute, a clumbing shrub growing in Java, gives a juice termed Upas tieute, said to be used by the natives as an arrow poison; it produces death by violent convulsions, the heart stopping before respiration.

S. Toxifera yields the deadly poison Curare (Woorari or Urari) used by the natives of British Guiana.

S. Pseudo is found in the mountains and forests of India. It supplies the seeds known as clearing nuts. The fruit is black, the size of a cherry, containing only one seed; fruit and seeds are used medicinally in India and also to clear muddy water, the seeds being rubbed for a minute inside the vessel and the water then allowed to settle; their efficiency depending on their albumen and casein contents acting as a fining agent similar to those employed to clarify wine and beer.

S. Ignatii is found in the Philippines, the seeds containing strychnine and brucine, strychnine being present in greater quantity than in Nux Vomica. A tincture made from the beans is official in the British Pharmacopoeia Codex.

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PARSLEY, FOOL'S

Botanical: Aethusa cynapium (LINN.)

Family: N.O. Umbelliferae.

Synonyms: Lesser Hemlock. Smaller Hemlock. Dog Parsley. Dog Poison.

Part Used: Herb.

Introduction

This annual plant is not unlike both Parsley and Hemlock. Its leaves, which are very similar to those of Parsley, are more acute, of a darker green and when bruised emit a disagreeable odour. When in flower it is easily distinguished because it has no general involucre and the partial involucre is composed of three to five long pendulous bracts which are drawn to one side, also the flowers, instead of being yellow, are white. It differs from Hemlock in being smaller, having its stem unspotted and the ridges of its fruit not wavy, also in the odour of the leaves, which is less unpleasant than that of Hemlock.

Constituents

The active principle is an alkaloid, Cynopine.

Medicinal Action and Uses

Though poisonous, the plant is less so than hemlock. Poisoning from Fool's Parsley showed symptoms of heat in the mouth and throat and a post-mortem examination showed redness of the lining membrane of the gullet and windpipe and slight congestion of the duodenum and stomach.

It is used medicinally as a stomachic and sedative for gastro-intestinal troubles in children, for summer diarrhoea and cholera infantum.

PARSNIP, WATER

Botanical: Sium latifolium.

Family: N.O. Umbelliferae.

Synonym: Water Hemlock.

Sium latifolium, the Broad-leaved Water Parsnip, is another of the umbelliferous plants sometimes called Water Hemlock. It occurs in watery places all over the British Isles.

The long creeping root-stock of this and the somewhat smaller, closely allied species *S. angustifolium* is poisonous, but pigs and oxen eat the stem and leaves without harm. However, cows in milk should not be allowed to eat it, as it communicates a disagreeable taste to the milk.

Both species are easily recognized by their pinnate leaves, the leaf-stalks carrying about six to eight pairs of ovate, toothed leaflets. The umbels of white flowers are flat and have a general involucre composed of broadish or lance-shaped bracts, and there is also an in volucel. The fruit bears slender ribs. Theerect, furrowed stems are from 3 to 6 feet high.

PARIS, HERB

Botanical: Paris quadrifolia (LINN.)

Family: N.O. Trilliaceae.

Synonyms: Herba Paris. Solanum quadrifolium. Aconitum pardalianches. True Love. One Berry.

(French) Parisette.

(German) Einbeere.

Part Used: The entire plant, just coming into bloom.

Habitat: Europe, Russian Asia, and fairly abundant in Britain, but confined to certain places.

Introduction

This singular plant gets its generic name of *Paris* from *par* (paris), equal on account of the regularity of its leaves. In olden times it was much esteemed and used in medicine, but to-day its use is almost confined to homoeopathy. It is a herbaceous perennial plant found in moist places and damp shady woods.

It has a creeping fleshy rootstock, a simple smooth upright stem about 1 foot high, crowned near its top with four pointed leaves, from the centre of which rises a solitary greeny-white flower, blooming May and June with a foetid odour; the petals and sepals remain till the purply-blackberry (fruit) is ripe, which eventually splits to discharge its seeds.

Constituents

A glucoside called Paradin.

Medicinal Action and Uses

Narcotic, in large doses producing nausea, vomiting, vertigo, delirium convulsions, profuse sweating and dry throat. The drug should be used with great caution; overdoses have proved fatal to children and poultry. In *small doses* it has been found of benefit in bronchitis; spasmodic coughs, rheumatism; relieves cramp, colic, and palpitation of the heart; the juice of the berries cures inflammation of the eyes.

A cooling ointment is made from the seeds and the juice of the leaves for green wounds and for outward application for tumours and inflammations. The powdered root boiled in wine is given for colic. One or 2 scruples acts as an emetic in place of Ipecacuanha. It has been used as an aphrodisiac—the seeds and berries have something of the nature of opium.

The leaves in Russia are prescribed for madness. The leaves and berries are more actively poisonous than the root. Herb Paris is useful as an *antidote* against mercurial sublimate and arsenic. A tincture is prepared from the fresh plant.

Other Species

Paris polyphylla, which grows in Nepaul.

PLEURISY ROOT

Botanical: Asclepias tuberose (LINN.)

Family: N.O. Asclepiadaceae.

Synonyms: Butterfly-weed, Swallow-wort. Tuber Root. Wind Root. Colic Root. Orange Milkweed.

Part Used: Root.

The genus *Asclepias* contains about eighty species, mostly natives of North America, a few being indigenous to South America and Africa.

Asclepias Tuberosa, common from Canada southwards, growing from Ontario to Minnesota, most abundantly southward and southwestward, is known popularly as Pleurisy Root, from its medicinal use. Its stem forms an exception to Asclepias in general, by being almost or entirely devoid of the acrid milky juice containing caoutchouc, that distinguishes the rest of the genus and has gained them the name of Milkweeds.

Introduction

It is a handsome, fleshy rooted, perennial plant, growing 1 to 1 1/2 foot high and bearing corymbs of deep yellow and orange flowers in September. When cultivated, it does not like being disturbed, and prefers good peat soil.

The rootstock, the part used medicinally, is spindle-shaped and has a knotty crown, slightly but distinctly annulate, the remainder longitudinally wrinkled.

The dried root as found in commerce is usually in cut or broken pieces of variable size, 1 to 6 inches long and about 3/4 inch in thickness, externally pale orange-brown, becoming greyish-brown when kept long, internally whitish. It is tough and has an uneven fracture; the broken surface is granular; that of the bark is short and brittle. The wood is yellowish, with large white medullary rays. The drug is almost inodorous, but has a bitterish and disagreeable, somewhat acrid taste.

The powdered drug is yellowish brown and when examined under the microscope shows numerous simple or 2 to 4 compound starch grains, also calcium oxalate crystals.

The Western Indians boil the tubers for food, prepare a crude sugar from the flowers and eat the young seed-pods, after boiling them, with buffalo meat. Some of the Canadian tribes use the young shoots as a potherb, after the manner of asparagus.

Constituents

The root contains a glucosidal principle, Asclepiadin, which occurs as an amorphous body, is soluble in ether, alcohol and hot water. It also contains several resins, and odorous fatty matter, and a trace of volatile oil. It yields not more than 9 percent of ash.

Medicinal Action and Uses

Antispasmodic, diaphoretic, expectorant, tonic, carminative and mildly cathartic.

From early days this Asclepias has been regarded as a valuable medicinal plant. It is one of the most important of the indigenous American remedies, and until lately was official in the United States Pharmacopoeia.

It possesses a specific action on the lungs, assisting expectoration, subduing inflammation and exerting a general mild tonic effect on the system, making it valuable in all chest complaints. It is of great use in pleurisy, mitigating the pain and relieving the difficulty of breathing, and is also recommended in pulmonary catarrh.

It is extensively used in the Southern States in these cases, also in consumption, in doses of from 20 grains to a drachm in a powder, or in the form of a decoction. It has also been used with great advantage in diarrhoea, dysentery and acute and chronic rheumatism, in low typhoid states and in eczema. It is claimed that the drug may be employed with benefit in flatulent colic and indigestion, but in these conditions it is rarely used.

In large doses it acts as an emetic and purgative.

A teacupful of the warm infusion (1 in 30) taken every hour will powerfully promote free perspiration and suppressed expectoration. The infusion may be prepared by taking 1 teaspoonful of the powder in a cupful of boiling water.

The decoction is taken in doses of 2 to 3 fluid ounces.

The dose of the fluid extract is 1/2 to 1 drachm; of Asclepin, 1 to 4 grains.

A much-recommended herbal recipe is: Essence of composition powder, 1 OZ.; fluid extract of Pleurisy Root, 1 OZ. Mix and take a teaspoonful three or four times daily in warm sweetened water.

It is often combined with Angelica and Sassafras for producing perspiration in fever and pleurisy and for equalizing the circulation of the blood.

More than a dozen other species have similar properties.

POPPY, WHITE

Botanical: Papaver somniferum (LINN.)

Family: N.O. Papaveraceae.

Synonyms: Opium Poppy. Mawseed.

Parts Used: Capsules, flowers.

Habitat: The Opium Poppy (*Papaver somniferum*, var. *album*) is indigenous to Asia Minor, and is cultivated largely in European and Asiatic Turkey, Persia, India and China for the production of Opium.

It has been observed growing on the cliffs between Folkestone and Dover.

The word opium is derived from the Greek opos (juice).

Introduction

The plant is an erect, herbaceous annual, varying much in the colour of its flowers, as well as in the shape of the fruit and colour of the seeds. All parts of the plant, but particularly the walls of the capsules, or seed-vessels, contain a system of laticiferous vessels, filled with a white latex.

The flowers vary in colour from pure white to reddish purple. In the wild plant, they are pale lilac with a purple spot at the base of each petal.

In England, mostly in Lincolnshire, a variety with pale flowers and whitish seeds is cultivated medicinally for the sake of the capsules. Belgium has usually supplied a proportion of the Poppy Heads used in this country, though those used for fomentations are mostly of home growth.

The capsules vary much in shape and size. They are usually hemispherical, but depressed at the top, where the many-rayed stigma occupies the centre; they have a swollen ring below where the capsule joins the stalk. Some varieties are ovoid, others again depressed both at summit and base. The small kidney-shaped seeds, minute and very numerous, are attached to lateral projections from the inner walls of the capsule and vary in colour from whitish to slate. The heads are of a pale glaucous green when young. As they mature and ripen they change to a yellowish brown, and are then cut from the stem if the *dried poppy* heads are required.

Opium is extracted from the poppy heads before they have ripened, and from Poppies grown in the East, those grown in Europe yielding but little of the drug.

When the petals have fallen from the flowers, incisions are made in the wall of the unripe capsules, care being taken not to penetrate to the interior. The exuded juice, partially dried, is collected by scraping—the scrapings being formed eventually into cakes, which are wrapped in poppy leaves or paper and further dried in the sun, the white milky juice darkening during the drying. The first poppies cultivated in this country for the purpose of extracting opium were grown by Mr. John Ball, of Williton, in 1794, but the production of opium has not become a home industry, as was expected at the time.

The cultivation of the Opium Poppy has also been experimentally carried out in France and Germany, but the expense of the necessary labour and land has been too great to render it profitable. The British Pharmacopoeia directs that opium, when used officially, must be obtained from Asia Minor. A certain amount is cultivated in Macedonia and exported from Salonica, and much of that cultivated in Persia is also sent to European markets. Chinese Opium is entirely consumed in the country and is not exported.

Constituents

The most important constituents of opium are the alkaloids, which constitute in good opium about one-fifth of the weight of the drug. No fewer than twenty-one have been reported.

The principal alkaloid, both as regards its medicinal importance, and the quantity in which it exists, is Morphine. Next to this, Narcotine and Codeine are of secondary importance. Among the numerous remaining alkaloids, amounting in all to about 1 percent of the drug, are Thebaine, Narceine, Papaverine, Codamine and Rhoeadine.

Meconic acid exists to the extent of about 5 percent combined with morphine. This acid is easily identified, and is important in toxicological investigation, as corroborative of the presence of opium.

Meconin and meconiasin exist in small quantity only. Mucilage, sugar, wax, caoutchouc and salts of calcium, and magnesiumare also contained in opium, and sulphuric acid is found in the ash.

The presence of starch, tannin, oxalic acid and fat, common constituents of most plants, indicates adulteration, as these substances do not occur normally in the drug. Powdered poppy capsules stones, small shot, pieces of lead, gum, grape must, sugary fruits, and other mechanical impurities, have also been used as adulterants of opium. The drug should not contain more than 12 1/2 percent of moisture.

Medicinal Action and Uses

Hypnotic, sedative, astringent, expectorant, diaphoretic, antispasmodic.

The drug was known in very remote times and the Greeks and Romans collected it. It is probable that the physicians of the Arabian school introduced the drug into India, as well as into Europe. It was originally used only as a medicine, the practice of opium eating having first arisen, probably in Persia.

Opium is one of the most valuable of drugs, Morphine and Codeine, the two principal alkaloids, being largely used in medicine.

It is unexcelled as a hypnotic and sedative, and is frequently administered to relieve pain and calm excitement.

For its astringent properties, it is employed in diarrhoea and dysentery, and on account of its expectorant, diaphoretic, sedative and antispasmodic properties, in certain forms of cough, etc.

Small doses of opium and morphine are nerve stimulants. The Cutch horsemen share their opium with their jaded steeds, and increased capability of endurance is observed alike in man and beast. Opium and morphine do not produce in animals the general calmative and hypnotic effects which characterize their use in man, but applied locally, they effectually allay pain and spasm. Owing to the greater excitant action in veterinary patients, the administration of opium does not blunt the perception of pain as effectually as it does in human patients.

The British Pharmacopceia Tincture of Opium, popularly known as Laudanum, is made with 3 OZ. of Opium and equal parts of distilled water and alcohol, and for immediate effects is usually preferable to solid Opium. Equal parts of Laudanum and Soap Liniment make an excellent anodyne, much used externally.

Preparations

Syrup of Poppy, B.P., 1885. Syrup Papav. alba. Capsules, 1 to 2 drachms.

Antidotes

Opium is not very quickly absorbed. When a poisonous dose has been swallowed, the stomach should be emptied as soon as possible by the stomach pump and washed with a solution of potassium permanganate. Administration of nitrites and of small doses of atropine hypodermically maintain cardiac action, but the atropine must be used cautiously, as full doses are apt to intensify paralysis both of the heart and spinal cord. The lethal tendency is further combated by strychnine used hypodermically and by artificial respiration. Coma is prevented by giving strong coffee and stimulant enemata and keeping the patient moving. Tincture of gall and other chemical antidotes are of little avail.

The leaves of *Combretum Sundaicum*, a plant native to the Malay Peninsula and Sumatra, have been used in the form of a decoction of the roasted leaves, as a cure for the opium habit among the Chinese.

Cultivation

The plants prefer rich, moist soil and much sun, and are often grown in succession to wheat and barley.

The land is manured and ploughed in autumn, to ensure a fine tilth in spring. Sowing is done at the end of March or in April—according to weather—allowing 1 lb. of seed per acre, and drilling in rows a foot apart. The whitest seeds are preferred.

Plants which are too forward are liable to be cut down by late frosts, while if the seed is sown too late, the seedlings may become dwarfed if dry weather sets in before they are well established. A light roller is sufficient to ensure the seeds being covered. When the plants are 3 or 4 inches high, cut them with the hoe into clumps about 6 to 9 inches apart, and afterwards 'single' them, leaving a solitary strong plant from each group. Weeding is necessary, and a dressing of soot may be given if support appears to be needed.

Poppy heads of pale colour are most desired, but a week's rain, or even a few nights' heavy dew, may spoil the colour of the ripening fruit. High winds and heavy rains may cause much destruction, as the plants become top-heavy. The yield is very variable.

The capsules are left on the stems after the petals have fallen, until they cease to enlarge. The stems should then be bent in the middle and the capsules left on the plant until they are firm, which will be about September.

In India, when the flowers are in bloom, the first step is the removal of the petals, which are used in packing the prepared drug. After a few days, the imperfectly ripened capsules are scarified from above downwards by two or three knives tied together and called 'mushturs.' These make a superficial incision, or series of incisions, into the capsule, whereupon a milky juice exudes, which is allowed to harden and is then removed and collected in earthen pots.

The time of day chosen for slicing the capsules is about two o'clock in the afternoon, when the heat of the sun causes the speedy formation of a film over the exuded juice; great attention is also paid to the weather, as all these causes modify the quantity, quality, or speediness of exudation of the opium. The capsules are submitted to two or three slicing processes at intervals of a few days, and the drug is ultimately conveyed to the government factory where it is kneaded into a homogeneous mass by native workmen.

The capsules contain the principal constituents of opium, the most important of which is the alkaloid Morphine, which exists in combination with meconic and sulphuric acids. The seeds are free from morphine; their principle constituent is the pale yellow fixed oil, used as a drying oil by artists, as well as for culinary and various technical purposes. The action of poppy capsules is the same as that of opium, anodyne and narcotic, but much weaker.

The crushed capsules are used as a poultice, together with chamomile.

A syrup is prepared from the capsules, prescribed as an ingredient in cough medicine. Syrup of Poppy is often employed to allay cough and likewise as an opiate for children; in the latter case it should be used with great caution.

Decoction of Poppy, made from the bruised capsules and distilled water, is not given internally, but is employed as an external application to allay pain and soothe.

The broken capsules are sold at a cheaper rate, for making fomentations.

The grey seeds are sold for birds' food, under the name of 'maw' seed, and are derived from the dark-red flowered form of *Papaver Somniferum*; the var. *album* having white seeds. On the Continent the seeds are much used in special poppy cakes and are sprinkled on rolls, as also in India, where they are used in the native pancakes or 'chupaties.' Anodyne, expectorant. The fresh petals are directed by the British Pharmacopceia for preparing a syrup, which may be given in 1 drachm doses, occasionally, as a mild astringent, but is principally employed as a colouring agent for mixtures and gargles.

Culpeper tells us that a syrup made of the leaves and flowers is effectual in pleurisy and erysipelas, or the green leaves can be applied outwardly, made into an ointment, but Gerard says these claims are without foundation and that 'it is only chance when persons are relieved by it.'

Culpeper also tells us:

'it is more cooling than any of the other Poppies, and therefore cannot but be as effectual in hot agues, frenzies, and other inflammations either inward or outward. Galen saith, The seed is dangerous to be used inwardly. '

There are other varieties of the Field Poppy —*P. Dubium*, frequently met with in some parts of the country, is a smaller, more slender plant than *P. Rhoeas*, and may be at once distinguished by the capsule, which is twice as long as broad, and by the bristles, which are flattened up against the stem. *P. hybridum* is less branched than the Field Poppy, which it greatly resembles, but differs in the filaments of the stamens, which are dilated from below upwards; and in the capsule, which, though globular, is covered with stiff bristles. This species is rare in this country.

P. Argemone is the smallest of the British Poppies; its capsule is in shape like that of *P. Dubium*, but it has a few stiff hairs or bristles which are directed upwards.

POTATO

Botanical: Solanum tuberosum (LINN.)

Family: N.O. Solanaceae.

Part Used: Edible tubers.

The Potato is nearly related to the Nightshades, belonging to the same genus, *Solanum*. Its flowers are very similar in form, but larger and paler in colour than those of *Solanum Dulcamara*.

The stalks, leaves and green berries possess the narcotic and poisonous properties of the Nightshades, but the tubers we eat (which are not the root, but mere enlargements of underground stems, shortened and thickened, in which starch is stored up for the future use of the plant), not being acted on by light, do not develop the poisonous properties contained by that part of the plant above ground.

The influence of light on the tubers can be observed if in spring-time young green potatoes are exposed to daylight, when it will be found that they become poisonous and have a disagreeable taste.

The Potato was introduced into Europe early in the sixteenth century, being brought to Spain from Peru, and was first brought into England in 1586 from North America, the colonists sent out by Sir Walter Raleigh bringing it back with them from Virginia.

Gerard, in his Herbal published in 1597, gives a figure of the Potato, under the name of 'Potato of Virginia'—to distinguish it from the Sweet Potato. The Herbal contains a portrait of himself on the frontispiece holding in his hand a spray of the Potato plant with flowers and berries.

Though Sir Walter Raleigh was the first to plant the Potato, on his estate at Youghall, near Cork, it is said that he knew so little about it that he tried to eat the berries, and on discovering their noxious character, ordered the plants to be rooted out. It is said that the gardener in doing so, first learnt the value of their wholesome tubers.

From Ireland, the Potato was soon after carried into Lancashire, but for some time Potatoes were only grown as a delicacy for the epicure, not as food for the people. Both Gerard and Parkinson refer to them in this manner.

The Puritans opposed their cultivation, because no mention of them could be found in the Bible, and it was not until the middle of the eighteenth century that potatoes became common in this country as a vegetable. As late as 1716, Bradley, in his *Historia Plantarum Succulentarum*, speaks of them as 'inferior to skirrets and radishes.'

The Potato is indigenous in various parts of South America, plants in a wild state having been found on the Peruvian coast, as well as on the sterile mountains of Central Chile and Buenos Aires. The Spaniards are believed to have first brought it to Europe, from Quito, in the early part of the sixteenth century. It afterwards found its way into Italy, and from thence it was carried to Mons, in Belgium, by one of the attendants of the Pope's legate. In 1598 it was sent from Mons to the celebrated botanist Clusius at Vienna, who states that in a short time it spread rapidly throughout Germany. In the time of James I, potatoes cost 2s. a pound, and are mentioned in 1619 among the articles provided for the royal household. In 1633, when their valuable properties had become more generally known, they were noticed by the Royal Society, and measures were taken to encourage their cultivation in case of famine; but it was not till nearly a century after this that they were grown to any extent in England.

In 1725 they were introduced into Scotland and cultivated with much success, first in gardens, and afterwards (about 1760), when they had become plentiful, in the open fields. On the Continent, the adoption of the Potato as a vegetable met with considerable prejudice, and it did not become a general article of food for some time after it was in general use here. Gerard says: 'Bauhine saith that he heard that the use of these roots was forbidden in Burgundy for that they were persuaded the too frequent use of them caused the leprosie'—a belief without any foundation, for the disease is now confined to countries where the Potato is not grown, and its antiscorbutic properties have been proved.

Linnaeus for some time objected to the use of the Potato on account of its connexion with the Deadly Nightshade and Bittersweet. Solanine, the poisonous active principle contained in the stalks, leaves and unripe fruit, is very powerful, and has not yet been fully investigated. It is also present in the peel of the tuber, but is dissipated and rendered inert when the whole potato is boiled and steamed, and is decomposed by baking.

Constituents

The tuber is composed mainly of starch, which affords animal heat and promotes fatness, but the proportion of muscle-forming food is very small—it is said that 10 1/2 lb. of the tubers are only equal in value to 1 lb. of meat. The raw juice of the Potato contains no alkaloid, the chief ingredient being potash salts, which are present in large quantity. The tuber also contains a certain amount of citric acid—which, like Potash, is antiscorbutic—and phosphoric acid, yielding phosphorus in a quantity less only than that afforded by the apple and by wheat. It is of paramount importance that the valuable potash salts should be retained by the Potato during cooking. If peeled and then boiled, the tubers lose as much as 33 percent of potash and 23 percent of phosphoric acid, and should, therefore, invariably be boiled or steamed with their coats on. Too much stress cannot be laid on this point. Peeled potatoes have lost half their food-value in the water in which they have been boiled. The Potato is not only important as a valuable article of diet, but has many other uses, both medicinal and economic.

To carry a raw potato in the pocket was an old-fashioned remedy against rheumatism that modern research has proved to have a scientific basis. Ladies in former times had special bags or pockets made in their dresses in which to carry one or more small raw potatoes for the purpose of avoiding rheumatism if predisposed thereto. Successful experiments in the treatment of rheumatism and gout have in the last few years been made with preparations of raw potato juice. In cases of gout, rheumatism and lumbago the acute pain is much relieved by fomentations of the prepared juice followed by an application of liniment and ointment. Sprains and bruises have also been successfully treated by the Potato-juice preparations, and in cases of synovitis rapid absorption of the fluid has resulted. Although it is not claimed that the treatment in acute gout will cure the constitutional symptoms, local treatment by its means relieves the pain more quickly than other treatment. Potato starch is much used for determining the diastatic value of malt extract. Hot potato water has in years past been a popular remedy for some forms of rheumatism, fomentations to swollen and painful parts, as hot as can be borne, being applied from water in which 1 lb. of unpeeled potatoes, divided into quarters, has been boiled in 2 pints slowly boiled down to 1 pint Another potato remedy for rheumatism was made by cutting up the tubers, infusing them together with the fresh stalks and unripe berries for some hours in cold water, and applying in the form of a cold compress. The potatoes should not be peeled. Uncooked potatoes, peeled and pounded in a mortar, and applied cold, have been found to make a very soothing plaster to parts that have been scalded or burnt. The mealy flour of baked potato, mixed with sweet oil, is a very healing application for frost-bites.

In Derbyshire, hot boiled potatoes are used for corns. Boiled with weak sulphuric acid, potato starch is changed into glucose, or grape sugar, which by fermentation yields alcohol this spirit being often sold under the name of British Brandy.

A volatile oil—chemically termed Amylic alcohol, in Germany known as Fuselöl—is distilled by fermentation from potato spirit.

Although young potatoes contain no citric acid, the mature tubers yield enough even for commercial purposes, and ripe potato juice is an excellent cleaner of silks, cottons and woollens. A fine flour is prepared from the Potato, and more used on the Continent than in this country for cake-making.

POTATO, PRAIRIE

Botanical: Psoralea.

Family: N.O. Leguminosae.

Synonyms: Prairie Turnip. Tipsinah. Taahgu.

Parts Used: Root, leaf, seeds.

Habitat: United States. Other species of the genus in India and Europe.

Introduction

The tubers of *Psoralea esculenta* are eaten by the Indians and settlers of the North-western United States. The other species have various medicinal qualities. *P. pedunculata or P. melilotoides*, the Virginian variety, is also known as Congo Root, Bob's Root, and Samson's Snakeroot. Leaflets of *P. obliqua*, bitter, and of a distinct odour, have been found to be mixed with Buchu.

Constituents

Of the tuber, 70 percent starch and 5 percent of a new sugar not yet fully investigated. The root of the Virginian variety contains a volatile oil of pungent taste, and a bitter principle, not tannin. The Indian *P. corylifolia* yields a useful oleoresin.

Medicinal Action and Uses

P. glandulosa, or yolochiahitl, has a leaf included in the Mexican Pharmacopceia as a tonic or anthelmintic, and an emetic root. *P. bituminosa* of Europe and *P. physodes* of California are tonic and emmenagogic. The root of the Virginian variety is a valuable, aromatic tonic, useful in chronic diarrhoea, while the Indian species is useful for leucoderma and other skin diseases.

POTATO, WILD

Botanical: Convolvulus panduratus.

Family: N.O. Convolvulaceae.

Synonyms: Mechameck. Wild Jalap. Man-in-the-earth. Man-in-the-ground. Manroot. Now Ipomcea fastigiata, Sweet.

Part Used: Root.

Habitat: United States and a small amount in South America.

Introduction

The perennial, tapering root is very large, being from 2 to 8 feet in length, and 2 to 5 inches in diameter.

It is brownish-yellow outside, whitish and lactescent within, having an acrid taste and disagreeable odour. It loses 75 percent of weight in drying. Usually it arrives in transverse, circular sections, not readily reducible to greyish powder. It is stated that the Red Indians can handle rattlesnakes with ease and safety after wetting their hands with the milky juice of the root.

The leaves are 2 to 3 inches long, the flowers large and white, and the fruit an oblong, two-celled capsule.

Constituents

Unknown.

Medicinal Action and Uses

Mildly cathartic and diuretic. It was formerly used in strangury and calculous diseases, and also slightly influences lungs, liver, and kidneys without excessive diuresis or catharsis. Probably the active principle would prove stronger than the crude root.

Dosage

40 grains of the dried root.

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SABADILLA

Botanical: Veratrum sabadilla.

Family: N.O. Liliaceae.

Synonyms: Cevadilla. Schoenocaulon officinale. Melanthium sabadilla. Veratrum officinale. Helonias officinalis. Sabadilla officinarum. Asagraea officinalis. Sabadillermer.

Parts Used: Seeds, dried fruit.

Habitat: Southern North America, Guatemala and Venezuela.

Introduction

The name Schcenocaulon indicates the habit of the scape, meaning 'a rush' and 'a stem.' The name Asagrcea commemorates Professor Asa Gray of Harvard University, the most distinguished of living American botanists. It is not quite certain whether the seeds are obtained from the Veratrum Sabadilla, a plant 3 or 4 feet high, or from the V. officinale, differing slightly in appearance and construction.

The seeds are black, shining, flat, shrivelled and winged, odourless, with a bitter, acrid, persistent and disagreeable taste, the pale grey, amorphous powder being errhine and violently sternutatory. The seeds were known in Europe as early as 1752, but officially only as the source of veratrine.

Constituents

Sabadilla contains several alkaloids, the most important being Cevadine, yielding cevine on hydrolysis; Veratrine, obtained from the syrupy liquor from which the cevadine has crystallized; and Cevadilline or Sabadillie, obtained after the extraction of the veratrine with ether.

Two other alkaloids have been isolated: Sabadine, which is less sternutatory than veratrine, and Sabadinine, which is not sternutatory. Sabadilla yields about 0.3 percent of veratrine. The seeds also contain veratric acid, cevadic acid, fat and resin.

Medicinal Action and Uses

Sabadilla, or cevadilla, is an acrid, drastic emeto-cathartic, in overdoses capable of producing fatal results. Cevine was found to be less poisonous than cevadine, though producing similar symptoms. The powdered seeds have been used as a vermifuge, and to destroy vermin in the hair, being the principal ingredient of the pulvis capucinorum used in Europe.

Cevadilla was formerly used internally as an anthelmintic, and in rheumatic and neuralgic affections. The highly poisonous veratria, which is derived from it, has been given in minute doses internally in acute rheumatism and gout, and in some inflammatory diseases, but it must be used with caution. Veratria is useful as an ointment in rheumatism and neuralgia, but is regarded as being less valuable than aconite. The ointment is also employed for the destruction of pedicule. Applied to unbroken skin it produces tingling and numbness, followed by coldness and anaesthesia. Given subcutaneously, it causes violent pain and irritation, in addition to the symptoms following an internal dose.

The principal reason against its internal use is its powerful action on the heart, the contractions of the organ becoming fewer and longer until the heart stops in systole.

Dosage

From 5 to 20 grains as a taenicide. Ointment veratrine, B.P.

Poisonous, if any, with Antidotes

Large doses paralyse heart action and respiration, and its use is so dangerous that it is scarcely ever taken internally.

SAFFRON, MEADOW

Botanical: Colchicum autumnale (LINN.)

Family: N.O. Liliaceae.

Synonym: Naked Ladies.

Parts Used: Root, seeds.

Habitat: Grows wild in meadows, especially on limestone.

Introduction

It has lanceolate leaves, dark green, glabrous, often a foot long. Flowers light purple or white, like crocus but for their six stamens; the ovaries remain underground until the spring after flowering, when they are borne up by the elongating peduncles and ripen. It flowers in September and October. The leaves and fruit are poisonous to cattle.

The root is called a *corm*, from which in autumn the light-purplish mottled flowers arise.

Cultivation

Requires light, sandy loam, enriched with decayed manure or leaf mould. Plant the bulbs 3 inches deep and 3 inches apart in July or August, in moist beds or rockeries, shrubbery, borders or lawns near shade of trees. The foliage dies down in June and July, and does not reappear until after the plant has flowered.

It may also be propagated by seeds sown 1/8 inch deep in a bed of fine soil outdoors in August or September, or in pans or boxes of similar soil in cold frame at the same time, transplanting seedlings 3 inches apart when two years old; or by division of bulbs in August. Seedling bulbs do not flower till four or five years old.

Medicinal Action and Uses

The Colchicum is valued for its medicinal properties. The parts used are the root and seeds, these being anti-rheumatic, cathartic, and emetic. Its reputation rests largely upon its value in acute gouty and rheumatic complaints. It is mostly used in connexion with some alkaline diuretic; also in pill form. Overdoses cause violent purging, etc.

The active principle is said to be an alkaline substance of a very poisonous nature called Colchinine. It is acrid, sedative, and acts upon all the secreting organs, particularly the bowels and kidneys.

It is apt to cause undue depression, and in large doses acts as an irritant poison. Dr. Lindley relates the case of a woman who was poisoned by the sprouts of Colchicum, which had been thrown away in Covent Garden Market and which she mistook for onions.

The Hermodactyls of the Arabians, formerly celebrated for soothing pains in the joints, are said to be this plant.

The corm or root is usually sold in transverse slices, notched on one side and somewhat reniform in outline, white and starchy internally, about 1/8 inch thick, and varying from 3/4 to 1 inch in diameter. Taste sweetish, then bitter and acrid. Odour radish-like in fresh root, but lost in drying.

Preparations

Powdered root, 2 to 5 grains. Extract, B.P., 1/4 to 1 grain. Fluid extract (root), 1 to 10 drops. Fluid extract (seed), U.S.P., 1 to 10 drops. Tincture, B.P., 5 to 15 drops. Wine, B.P., 10 to 30 drops. Acetic solid extract, 1/4 to 1 grain.

SKIRRET

Botanical: Sium sisarum.

Family: N.O. Umbelliferae.

Part Used: Root.

Sium sisarum, or Skirret, is a plant of Chinese origin, cultivated in Europe. It has a sweetish, somewhat aromatic root, which is used as a vegetable in much the same manner as the Oyster plant or Salsify (*Tragopogon porrifolius*) and the Parsnip.

It is supposed to be a useful diet in chest complaints.

The name (*sium*) is from the Celtic siu (water), in allusion to their habitat.

S. Sisarum has been cultivated in this country since A.D. 1548. When boiled and served with butter, the roots form a dish, declared by Worlidge, in 1682, to be 'the sweetest, whitest, and most pleasant of roots.'

Culpeper says:

'*Sisari, Secacul.* Of Scirrets.—They are hot and moist, of good nourishment, something windy, as all roots; by reason of which they . . . stir up appetite . . .'

SPURGES

Botanical: Euphorbias.

Family: N.O. Euphorbiaceae.

Genera more than 200, species more than 3,000, representing almost all habits of growth and exhibiting a high degree of adaptability to varying environments. The valuable rubbers produced by the family are of great importance, notably that from the prepared milk juice of several species of *Hevea*, known in commerce as Para rubber.

The medicinal properties of the family depend chiefly upon two classes of constituents; first, fixed oils, or the fatty acids freed by their decomposition, typical properties of which are castor oil, from *Recinus communis*, and Croton oil, from *Croton tigilum*; also valuable drying oils, the artists' oil or lambang from the seeds of *Aleurites moluccana*, tung oil, said to be the most perfect drying oil known, from seeds of *A. cordata*. From *A. laccifera* gum-lac, of a very superior quality, is obtained; another excellent drying oil is obtained from *Sapium sebiferum*, known as Chinese tallow. Besides the cathartic properties resident in the fixed oils of these seeds, somewhat similar properties, almost always accompanied by more or less emesis, exists in the plant-parts generally, the active constituents being usually carried in the milk juices, so that the family has yielded a large number of drugs used somewhat like Ipecacuanha.

The genus *Euphorbia* comprises nearly a thousand species, and a large number of these species yield a milky juice. Some are herbaceous or shrubby, with or without leaves, the leafless varieties flourishing on African deserts like the cactus, having spiny stems. The milky juice of the stem coagulates on exposure to the air, forming a resinous mass which is generally marketed in the form of tears.

For external use it is of service in chronic rheumatism and paralysis as a counter-irritant, alone, or combined with cantharides, merezeon bark, etc., or as a plaster when mixed with Burgundy pitch or resin. It is a violent irritant and caustic poison. At the Cape, the capsules are used for destroying animals. It may produce delirium.

SPURGE, OFFICINAL

Botanical: Euphorbia resinifera.

Family: N.O. Euphorbiaceae.

Synonyms: Euphorbia officinarum. Poisonous Gum-Thistle. Dergmuse. Darkmous. Euphorbium Bush. Gun Euphorbium.

Part Used: Concrete resinous juice.

Habitat: The slopes of the Great Atlas range in Morocco.

Introduction

Resembling a cactus in appearance, this leafless perennial plant has a stem about 4 feet in height, and many branches. The flowers are small, simple, and bright yellow, and the fruit a small capsule with one seed in each cell. Specimens sent to Kew in 1870 have never flowered, but others have done so in Paris. Both Pliny and Dioscorides knew the drug, and its name is classical. The milky juice is collected from incisions made in the fleshy branches, and is so acrid that it burns the fingers. It flows down the stems and encrusts them as it hardens in the sun. Poor

Arabs bring in the resinous masses for sale in Morocco, whence it is chiefly exported from Mogador. The dust is so intensely irritant to the mucous membrane that the mouth and nose of those handling it must be covered by a cloth.

In commerce the drug is found in yellowish-brown 'tears' that have a waxy appearance. They are almost transparent, slightly aromatic only when heated, and often pierced with holes made by the prickles of the plant while drying. The taste is slight, but becomes very acrid.

It is said to be employed as an ingredient of paint used for preserving ships' bottoms.

At Mogador, the branches are used for tanning leather.

Constituents

The chief constituent is resin, and it also contains wax, calcium malate, potassium malate, lignin, bassorin, volatile oil, and water, with no soluble gum. Another analysis gives euphorbone, euphorbo-resene, euphorbic acid, calcium malate, a very acrid substance not yet isolated, and vegetable debris.

The acrid resin is soluble in alcohol, and will burn brilliantly, becoming very aromatic.

The powder is yellowish, and violently sternatatory.

Medicinal Action and Uses

The internal use of the drug has been abandoned, owing to the severity of its action. It is an irritant emetic and cathartic. Its chief use is as a vesicant, and principally in veterinary practice. It has been used in dropsy; mixed with cantharides as a 'gout plaister'; and as an errhine in chronic brain, ear, or eye complaints, sometimes mitigated with the powder of *Convallaria maialis*, but accidents have led to its use being discontinued.

SPURGES, VARIOUS

Euphorbia cerifera is one of the sources of Candelilla wax which occurs as a coating on all parts of the plant.

'PILLBEARING SPURGE' (*E. pilulifera*) is commonly known as Queensland asthma weed, cat's hair, in allusion to its globular, axillary inflorescences. Is very common in all tropical countries. Its principal constituents are resins described as glucosidal, wax, and volatile matter; it is collected whilst flowering and fruiting, and has been utilized by some practitioners with a certain success in the treatment of subacute and chronic inflammation of the respiratory duct. Toxic doses have killed small animals through failure of respiration. The decoction is taken in asthmatic conditions, chronic bronchitis, and emphysema, the tincture being used in coryza and hay fever.

Dosage

Compound Elixir of Euphorbia, C.F., from *E. pilulifera*. Tincture of Euphorbia, B.P.C., from *E. pilulifera*, 10 to 30 minims. Fluid extract of *E. pilulifera*, 1/2 to 1 drachm. Decoction of *E. pilulifera*, 1 in 40, 1 tablespoonful.

E. corollata: Dose of dried root as an emetic, 10 to 20 grains; as a cathartic, 3 to 10 grains.

E. hypericifolia: An infusion of the dried leaves, 1/2 OZ. infused in a pint of boiling water for 1/2 hour and a tablespoonful taken for a dose.

Other Species

E. tetragona, E. antiguorum of the African coast, and *E. canariensis* of the Canary Islands also supply the drug.

WHITE IPECACUANHA (*E. ipecacuanha*), the root of which is used, contains a fixed oil, starch, glucose, and various salts, also resin. Its medicinal properties are similar to *E. corollata*.

WHITE PURSLANE (*E. corollata*). Syn. White Parsley, Purging or Emetic Root, Apple Root, Wild Hippo. The whole plant is used, including the root. Its habitat is east and central North America. It abounds in lactiferous ducts, which contain starch; the resin is or carries the actual principle, the presence of glucoside is conjecture. Formerly it was used as an emetic in 10 to 20 grains, and as a cathartic in 3 to 10 grains, but because of its irritating and uncertain properties its use has been practically abandoned; the recent root bruised and applied to the skin produces vesication.

CAPER SPURGE (*E. lathyris*). (Syn. Mole Plant.) Has a milky juice of an acrid nature. Its seeds yield an abundance of fine clear oil called oil of Euphorbia; this is obtained by expression or by the action of alcohol or ether, and is colourless, inodorous, and almost insipid; it rapidly becomes rancid, and acquires a dangerous acrimony.

The oil is a very violent poison, producing violent purgation and having an irritating effect upon the mucous membrane of the intestinal canal, and especially on the larger intestines; the oil resembles croton oil. In doses of 5 drops it is said to be less acrid and irritating than croton oil; it must be recently extracted. The seeds to the number of twelve or fifteen are used by country people in France as a purgative. The root of the plant is equally purgative and emetic; the leaves are vesicant and are used by beggars to produce ulcers by which to excite pity; the juice is depilatory; the seeds contain aesculetin in the free state.

E. hypericifolia is regarded in tropical America as a powerful astringent and has a reputation in the cure of diarrhoea and dysentery; it has also narcotic properties. The juice is said to cause temporary blindness when applied to the eyes; it contains caoutchouc, gallic acid, resin and tannin.

SPOTTED SPURGE (*E. maculata*) represents a group used by eclectics and homoeopaths with claims for properties more or less special. It has been used in cholera, diarrhcea and dysentery in the form of an infusion of the leaves, and has been found to contain caoutchouc resin, tannin, and apparently euphorbon. Is said to be a valuable astringent; an infusion may be employed as an injection in the treatment of leucorrhoea. To this medicinal group belongs:

E. esula (Linn.) (Leafy Spurge) of Europe.

E. peplus (Linn.) of Europe.

E. helioscopia (Linn.) of Europe (Sun or Wart Spurge, Churnstaff, Seven Sisters).

E. humistrata (Engl.) of central North America.

E. hypericifolia (Linn.) of North America.

E. portulacoides of Chile.

E. iata (Eng.) of U.S.A.

E. marginata (Pursh.) (Mountain Snow) of western U.S.A.

E. Drummondii, the juice, has caused many fatalities to sheep and cattle in Australia.

E. cremocarpus is used in Australia for the poisoning of fish in calm pools and streams.

E. heterodoxa, a Brazilian species, said to have been used with extraordinary success against cancerous and syphilitic ulcers. It is a powerful irritant, mildly caustic; the milky juice preserved with salicylic acid is used.

E. prostata grows in the south-western portions of the U.S.A., and has the reputation of being a specific against the bite of the rattlesnake, spiders, etc.; the juice is used.

E. parviflora and *E. hirta*. Both used in India as antisyphilitics, and E. canescens similarly in Spain.

The juice of *E. linearis* is employed in Brazil for syphilitic ulcers of the cornua. *E. hiberna* was formerly much used in syphilis before the introduction of mercury. The plant is extensively employed by the peasantry of Kerry for stupefying fish, and so powerful are its qualities that a small basket filled with the bruised leaves will poison the fish for several miles down the river. The same properties are possessed by *E. platyphylla*, and in Brazil *E. cotinifolia* is used for the same purpose, and the acrid juice which drops from it is used by the natives to poison their arrows.

The seeds and leaves of *E. thymifolia* of India are given by the Tamuls as an anthelmintic and in bowel affections of children.

E. balsamifera, when cooked, is eaten in the Canaries.

The juice of *E. Mauritanica*, when dried, is employed as a condiment, and forms one of the adulterations of Scammony.

In countries bordering on the Mediterranean, *E. Peplis*, *E. spinosa*, *E. Dendroides*, *E. Aleppica*, *E. Apois*, are used as purgatives in domestic practice.

E. peplus, *E. peploides*, *E. pilosa*, *E. palustris* have the reputation of being remedies in hydrophobia.

E. Helisscopia juice is commonly applied to warts, and sometimes, though improperly, used to cure sore eyelids, causing in many instances intolerable pain and inflammation.

The bark of the roots of *E. Gerardiane*, *E. amydaloides* and *E. Cyparissias* have febrifuge reputations; but the latter is known to possess dangerous properties. It is destructive to sheep, and La Motte has seen a woman perish from having taken a lavement prepared with the plant. In France it is used as a popular purgative, under the name of Rhubarbe??des pauvres. Orfila regards it as a poison.

The milky juice of *E. amydaloides* is very acrid, and though not highly poisonous, corrodes and ulcerates the flesh wherever it is applied.

Warts and corns anointed with it are said soon to disappear, but great caution is needed in using it, or injury is likely to result to the surrounding skin. Though said to be a remedy for toothache, it is not to be recommended on account of its very acrid nature.

The juice of *E. tribuloides*, a small cactusshaped species growing in the Canaries, is there used as a diaphoretic. It is reported by Scopoli, in his *Flora Carnoilica*, that he has seen death occasioned by the administration of 30 grains of the seed of *E. esula*, and gangrene caused on the belly by the application of the plant on that part; he also adds that people have lost their eyesight by rubbing their eyes with its juice.

E. buxifolia in the West Indies, *E. papillosa* in Brazil, *E. laurifolia* in Peru, and *E. portulacoides* in Chile are used as purgatives.

E. tirucalli is employed in India as a vesicant, and in Java as a powerful emetic and purgative. It is said that exhalations from the tree cause the loss of eyesight; the juice is considered sudorific and, according to Sonnerat, is administered in India, in doses of a drachm, mixed with flour, daily as an antisyphilitic.

E. ligularia, another native of India, is held sacred to Munsa, the goddess of serpents; the root of the tree, mixed with black pepper, is employed for the cure of snake-bites, both internally and externally.

STAVESACRE

Botanical: Delphinium staphisagria (LINN.)

Family: N.O. Ranunculaceae.

Synonym: Lousewort.

Part Used: Seeds.

Habitat: Asia Minor and Europe.

Stavesacre is a species of Larkspur, a stout, erect herb attaining 4 feet in height, indigenous to Asia Minor and southern Europe. It is cultivated in France and Italy, our supplies having before the War been drawn chiefly from Trieste and from the south of Italy. Stavesacre was well known to both the Greeks and Romans. Dioscorides mentions it, and Pliny describes its use as a parasiticide. It continued to be extensively employed throughout the Middle Ages.

This Delphinium is an annual, with a hairy stem and hairy palmate leaves, composed of five to seven oblong lobes, which have frequently one or two acute indentures on their sides. The flowers form a loose spike at the upper part of the stalk, each on a short peduncle, and are of a pale-blue or purple colour.

Cultivation

The seeds of this species should be sown in April, where the plants are intended to remain and require no special treatment, growing in almost any soil or situation, but the plants are most luxuriant when given a deep, yellow loam, well enriched with rotted manure and fairly moist. They should be thinned to a distance of 2 feet apart.

Part Used

The dried, ripe seeds. Shake the seeds out of the pods on trays and spread them out to dry in the sun. Then pack away in airtight boxes or tins. The dried, ripe seeds are brown when fresh, changing to a dull, earthy colour on keeping. In shape they are irregularly quadrangular, one side being curved and larger than the others, and the surface of the seed is wrinkled and pitted.

They average about 6 mm. (nearly 1/4 inch) long and rather less in width, ten weighing about 6 grains. The seed coat is nearly tasteless, but the endosperm is oily and has a bitter and acrid taste. The seeds have no marked collour.

Constituents

The chief constituents of Stavesacre seeds are from 20 to 25 percent of alkaloidal matter, which consists chiefly of the bitter, acrid, crystalline, alkaloid Delphinine, an irritant poison, and a second crystalline alkaloid named Delphisine, and the amorphous alkaloid Delphinoidine. Less important are staphisagroine, of which traces only are present, and staphisagrine, which appears to be a mixture of the first three elements.

Medicinal Action and Uses

Vermifuge and vermin-destroying. Stavesacre seeds are extremely poisonous and are only used as a parasiticide to kill pediculi, chiefly in the form of the official ointment, the expressed oil, the powdered seeds, or an acid aqueous extract containing the alkaloids.

These seeds are so violently emetic and cathartic that they are rarely given internally, though the powdered seeds have been given as a purge for dropsy, in very small quantities at first and increased till the effect is produced. The dose at first should not exceed 2 or 3 grains, given in powder or decoction, but the administration of the drug must always be accompanied by great caution, as staphisagrine paralyses the motor nerves like curare.

The seeds are used as an external application to some cutaneous eruptions, the decoction, applied with a linen rag, being effectual in curing the itch. It is made by boiling the seeds in water.

Delphinine has also been employed similarly to aconite, both internally and externally, for neuralgia. It resembles aconite in causing slowness of pulse and respiration, paralysis of the spinal cord and death from asphyxia. By depressing the action of the spinal cord it arrests the convulsions caused by strychnine.

STROPHANTHUS

Botanical: Strophanthus Kombé (OLIV.)

Family: N.O. Apocynaceae.

Synonyms: Strophanthus hispidus. Kombé Seeds. Strophanti Semina.

Part Used: Dried, ripe seeds, deprived of their awns.

Habitat: Tropical East Africa.

Introduction: The name *Strophanthus* is derived from the Greek *strophos* (a twisted cord or rope) and *anthos* (a flower), thus expressing the chief peculiarity of its appearance, the limb of the corolla being divided into five, long, tail-like segments. The official Introduction of the seeds is 'lance-ovoid, flattened and obtusely-edged; from 7 to 20 mm. In length, about 4 mm. in breadth, and about 2 mm.

In thickness; externally of a light fawn colour with a distinct greenish tinge, silky lustrous form, a dense coating of flat-lying hairs (*S. Kombé*) or light to dark brown, nearly smooth, and sparingly hairy (*S. hispidus*), bearing on one side a ridge running from about the centre to the summit; fracture short and somewhat soft, the fractured surface whitish and oily; odour heavy when the seeds are crushed and moistened; taste very bitter.'

In Germany the seeds of *S. hispidus* are preferred because of their guaranteed purity. This plant when growing alone is in the form of a bush, but is usually found as a woody climber inhabiting the forests between the coasts and the centre of the African continent. It then reaches to the tops of the highest trees, coiling on the ground and hanging in festoons from tree to tree.

The stem is several inches in diameter. The flowers are cream coloured, yellow at the base, purple-spotted above.

The British, French and Swiss officially favour *S. Kombé,* while the United States Pharmacopoeia recognizes both. There is a voluminous literature on the subject.

The seeds of all species of the genus possess hairs that have a characteristic, thickened base, somewhat like those of nux vomica seeds; those of several species are used for the preparation of arrow poison in Africa, at Kombé in the Manganja country, in the Gaboon district, and in Guinea and Senegambia. In Gaboon the poison is called inée, onayé, or onage. Some of the poisons closely resemble those of the genus *Acocanthera*, which are used for a similar purpose.

The plant yielding the arrow poison of Komb, was first brought to Europe by Sir John Kirke, and described as a new species by Oliver, of Kew, under the name of *S. Kombé.* In preparing the arrow poison, the seeds, deprived of their hairs, are pounded to a pulp, the adhesive sap of another plant is added, and the mixture smeared for 6 inches along the point of the arrow.

Game wounded by such an arrow is said to be rarely able to move 100 yards, while the flesh can be eaten without bad effect. Strophanthus is found in commerce either in pods or as clean seeds. It must be preserved in tightly-closed containers, adding a few drops of chloroform or carbon tetrachloride from time to time, to prevent attacks by insects. The usual course for the qualitative examination has been found insufficient, and a supplementary microscopical test is recommended. The question of its relative variability of strength as compared with digitalis is not definitely settled.

The seeds are reduced to powder with great difficulty. They are sometimes bruised in an iron mortar with broken glass, after drying.

As the active principle of Strophanthus is most abundant in the seeds, but is also found in the husks and hairs, pharmaceutical preparations of the drug should be made from the separated seeds, while other parts may be employed for the manufacture of Strophanthin.

Constituents

A glucoside, Strophanthin, an alkaloid, Inoeine, and fixed oil.

Sulphuric acid, diluted with one-fifth of its volume of water, colours the endosperm, and sometimes the cotyledons, dark green (presence of Strophanthin).

Herr Lampart and Müller received the Hagen Bucholz prize of the German Apothecaries Society for the proposed assay method following, based upon the preliminary extraction of the drug with absolute alcohol, the removal of oil from the precolate with petroleum ether, the conversion of the glucosides into strophanthidin by boiling with hydrochloric acid, and the subsequent extraction with chloroform, weighing, and calculating to strophanthin by multiplying by the factor 2.187.

The strophanthins from different species were found to vary somewhat in chemical composition, and Thoms proposes to name them as follows: *k-strophanthin* when obtained from *S. Kombé*, g-strophanthin when obtained from *S. gratus*, e-strophanthin when obtained from *S. Emini*, *h-strophanthin* when obtained from *S. hispidus*.

g-strophanthin is the one appearing to be identical with the glucoside Ouabain of Acocanthera.

Strophanthinum, a mixture of glucosides prepared from *S. Kombé*, is a whitish, crystalline powder freely soluble in water and giving a green coloration with sulphuric acid. Warmed with dilute acids it is readily hydrolized into Strophanthidin and a sugar.

Great care must be used in tasting it, and then only in very dilute solutions.

Medicinal Action and Uses

The sole official use of Strophanthus in medicine is for its influence on the circulation, especially in cases of chronic heart weakness. As its action is the same as that of digitalis, although more likely to cause digestive disturbances (Many practitioners are of opinion that Strophanthus does not cause digestive disturbances.—Editor), it is often useful as an alternative or adjuvant to the drug. Believed to have greater diuretic power, it is esteemed of greater value in cases complicated with dropsies. In urgent cases, the effects upon the circulation can be obtained almost immediately by means of the intravenous injection of its active principle. The hypodermic injection of Strophanthin is not recommended, owing to the intense local irritation it causes, and because of its strength it should be used with great care and under medical direction.

Dosages

Of Extractum Strophanthi of the B. P., from 1/4 to 1 grain. This extract takes the place of a solid preparation and can be administered in pills and capsules, 1 grain being equal to 5 minims of the United States tincture.

Of tincture of Strophanthus, B. P. and U.S.P., 5 to 15 drops.

Of Strophanthin, 1/200 of a grain.

The maximum daily dose should not exceed: For g-strophanthin, intravenously, 1/64 grain; by mouth, 1/2 grain. For k-strophanthin, intravenously, 1/40 grain; by mouth, 1/20 grain.

Poisonous, if any, with Antidotes

The greatest caution should always attend the use of strophanthin, though, unlike digitalis, its effects are not cumulative.

Varieties and Substitutions

There are twenty-eight recognized species of the genus in Africa and Asia, extending to China, the East Indies and the Philippines. The commercial drug is often largely compounded of other than the recognized species, and may contain the seeds of related varieties, especially those of Kickxia (Funtumia) africana, which are beardless and spindle-shaped. They turn brown, then red, instead of green, when treated with concentrated sulphuric acid.

S. Kombé grows solely in East Africa, but the seeds from different regions are often mixed before they are shipped.

S. hispidus, *S. glabra*, *S. Emini*, *S. courmontii* (both var. *Kerkii* and var. *Fallax*), *S. gratus* of *Sierra Leone*, and *S. Nicholsoni*, all contribute seeds.

The two most mixed with the official drug before exportation are those of S. gratus from the Senegal and Congo, where *S. hispidus* is found, and which are recommended by some authorities because easily recognized and yielding strophanthin readily in crystalline form, and *S. Thallone*.

At present Strophanthus seeds are less mixed than formerly. In 1892 the commercial seeds were classified as follows:

1. The official products of *S. Kombé* and *S. hispidus*, which contain strophanthin and no crystals of calcium oxalate.
2. Those resembling the official seeds, but coming from Mozambique and Sierra Leone.
3. Those containing calcium oxalate crystals but no strophanthin (from Senegal Lagos, Niger, German East Africa, Togoland, and Baol of Senegal).
4. A very hairy seed from the Upper Niger, varying from a silky white to brown; the embryo contains calcium oxalate crystals, but the seeds do not contain strophanthin.
5. Seeds said to be glabrous, but having hairs in the region of the raphe, come from Lagos and Zambesi and contain neither calcium oxalate crystals nor strophanthin.

SUMACHS

Family: N.O. Anacardiaceae.

The American Poison Ivy (*Rhus Toxicodendron, Linn.*) is one of the species of Sumachs, an attractive group of plants widely distributed in Europe, Asia and North America, varying much in habit from low bushes to moderately-sized trees, many of them familiar denizens of our gardens, for the sake of their ornamental foliage, which assumes beautiful tints in autumn, some of the varieties also bearing showy fruits. Several species are of considerable importance, their value being chiefly in their leaves and sap, and in the large galls that are found on their leaves after they have been punctured by a tiny insect. The so-called Chinese Galls, of an irregular shape and astringent taste, which are imported into this country from China for tanning purposes, are formed by the puncture of the leaves of Rhus semialata, a species of aphis, and are of considerable economic value, containing 70 to 80 percent of gallotannic acid.

SUMACH, SMOOTH

Botanical: Rhus glabra (LINN.)

Family: N.O. Anacardiaceae.

Synonyms: Upland Sumach. Pennsylvania Sumach. Rhus copallinum (Mountain Sumach). Rhus typhinum (Staghorn or Velvet Sumach).

Parts Used: Bark of branches and root, dried, ripe berries, and exudation.

Habitat: Almost all parts of the United States and Canada.

Introduction

There are several varieties of the plant, such as Rhus typhinum (Staghorn or Velvet Sumach), the berries of which now often replace those of R. glabra and R. copallinum (Mountain or Dwarf Sumach), and they should be carefully distinguished from the poisonous species. The non-poisonous have their fruit clothed with acid, crimson hairs, and their panicles are compound, dense, and terminal; the poisonous varieties have axillary panicles, and smooth fruit.

The flowers of R. glabra are greenish-red, and the fruit grows in clusters of small berries.

It is a shrub from 6 to 15 feet high, with straggling branches and a pale-grey bark, sometimes slightly red. It grows in thickets and waste places.

The berries should be gathered before the rain has removed their downy covering, for they are no longer acid when this has been washed off. They have a sour, astringent, not unpleasant taste, and are eaten freely by the country people. Their powder is a brownish-red.

When broken on the plant, a milky fluid is exuded from both bark and leaves, which forms later a solid gum-like body.

Excrescences are produced under the leaves containing quantities of tannic and gallic acid. They have been used as a substitute for imported Chinese galls, and found preferable.

The leaves, and, to a less extent, the bark, are largely used in tanning leather and dyeing. This Sumach, for the manufacture of extract for tanner's use, is largely cultivated in Virginia, where the annual crop amounts to from 7,000 to 8,000 tons.

The percentage of tannin in Virginian Sumach varies from 16 to 25 percent. That in the European or Sicilian Sumach (R. coriaria) falls from 6 to 8 percent below the percentage of the Virginian Sumach, yet the European is preferred by tanners and dyers, since by its use it is possible to make the finer, white leathers for gloves and fancy shoes.

The American product gives the leather a yellow colour, apparently due to the presence of quercitrin and quercitin. Large quantities of a dark-red, semi-fluid, bitter, astringent extract are prepared in Virginia from Sumach, and is said to contain 25 to 30 percent of tannin. It is used both in Europe and America.

An infusion of the berries affords an excellent black dye for wool. A medicinal wine can also be prepared from them.

Oil of Rhus may be extracted from the seeds of this and other species of the genus. It will attain a tallow-like consistency on standing, and can be made into candles, which burn brilliantly, though they emit a pungent smoke.

Constituents

The berries contain free malic acid and acid calcium malate coexist, with tannic and gallic acids, fixed oil, extractive, red colouring matter, and a little volatile oil. The active properties of both bark and berries yield to water.

Medicinal Action and Uses

The bark is tonic, astringent, and antiseptic; the berries refrigerant and diuretic.

A strong decoction, or diluted fluid extract, affords an agreeable gargle in angina, especially when combined with potassium chlorate. Where tannin drugs are useful, as in diarrhoea, the fluid extract is an excellent astringent.

The bark, in decoction or syrup, has been found useful in gonorrhoea, leucorrhoea, diarrhoea, dysentery, hectic fever, scrofula and profuse perspiration from debility.

Combined with the barks of slippery elm and white pine and taken freely, the decoction is said to have been greatly beneficial in syphilis. As an injection for prolapsus uteri and ani, and for leucorrhoea, and as a wash in many skin complaints, the decoction is valuable. For scald-head it can be simmered in lard, or the powdered root-bark can be applied as a poultice to old ulcers, forming a good antiseptic.

A decoction of the inner bark of the root is helpful for the sore-mouth resulting from mercurial salivation, and also for internal use in mercurial diseases. A free use of the bark will produce catharsis.

The berries may be used in infusion in diabetes, strangury bowel complaints, and febrile diseases; also as a gargle in quinsy and ulcerations of the mouth and throat, and as a wash for ringworm, tetters, offensive ulcers, etc.

The astringent excrescences, when powdered and mixed with lard or linseed oil, are useful in haemorrhoids.

The mucilagic exudation, if the bark be punctured in hot weather, has been used advantageously in gleet and several urinary difficulties.

Dosages

Of the fluid extract of bark, 1 to 2 drachms. Of the fluid extract of berries, 1 to 2 drachms. Of the decoction of bark, or infusion of berries, 1 to 4 fluid ounces. Rhusin, 1 to 2 grains.

The following has been recommended for gonorrhoea: Take 1 scruple each of the exudation and Canada balsam. Form into a pill mass with a sufficient quantity of powdered poke root, and divide into 10 pills, of which 1 or 2 may be taken three or four times daily.

SUMACH, SWEET

Botanical: Rhus aromatica (AIT.)

Family: N.O. Anacardiaceae.

Synonyms: Fragrant Sumach.

Part Used: Bark.

This species of Sumach, usually growing about 4 feet high, was introduced into England as an ornamental shrub in 1759.

Medicinal Action and Uses

The root-bark is astringent and diuretic. Used in diabetes and excessive discharge from kidneys and bladder. The wood exudes a peculiar odour and is used by the Indians in Arizona, California and New Mexico for making baskets.

Other Species

Rhus Diversilobe (*CALIFORNIAN POISON OAK*).

Medicinal Action and Uses

A tincture of the fresh leaves is used for eczema and skin diseases.

The American species, R. venenata and R. toxicodendron, produce effects imputed to the Upas-tree of Java. The hands and arms, and sometimes even the whole body, becomes greatly swollen from simply touching or carrying a branch of one of these plants, and the swelling is accompanied with intolerable pain and inflammation, ending in ulceration. Some people, however, are able to handle the plants with impunity. *R. venenata*, called the POISON SUMACH or POISON ELDER, is a tall shrub with pinnate leaves composed of eleven or thirteen smoothish leaflets.

From the sap of *R. vernicifera*, the VARNISH SUMACH or Lacquer-tree of China and

Japan, the varnish used in the manufacture of the famous Japanese lacquer-ware is prepared. The leaves and galls are also rich in tannin, and are used extensively for tanning various kinds of leather, and the expressed oil of the seed serves for candles. Japan Wax is obtained in Japan by expression and heat, or by the action of solvents from the fruit of another Sumach, R. succedanea. It consists almost entirely of palmitin and free palmitic acid, and is not a true wax; it is used in candlemaking, for adulterating white beeswax and in making pomades.

R. copallina, a North American tree, provides copal resin, a transparent substance with a slight tinge of brown, which when dissolved in any volatile liquid, generally in oil of turpentine, forms one of the most perfect and beautiful of all the varnishes (known by the name of Copal Varnish).

The venetian sumach, *R. cotinus*, though a native of Southern Europe, is so hardy a shrub as not to be injured by the frost of our winters, and is a familiar plant in our gardens, being cultivated for the very singular and ornamental appearance of its elongated, feathery fruit-stalks, which, combined with its blue-green leaves, have led to its common name of SMOKE PLANT. Both root and stem have been used for dyeing a yellow, approaching to orange, the colour obtained being, however, somewhat fugitive. The leaves are largely used for tanning.

Sumac Yellow is obtained from the dried and powdered branches of R. coriana, the ELM-LEAVED SUMACH, a shrub indigenous to the Mediterranean region, where it is cultivated for dyeing yellow and for tanningleather, the SICILIAN SUMACH being considered the best quality. The shoots are cut down every year close to the root, and after being dried are reduced to powder by means of a mill. An infusion of this yields a fawn colour, bordering on green, which may be improved by the judicious application of mordants.

The principal use, however, of Sumach in dyeing is the production of black, by means of the large quantity of gallic acid which it affords. The bark is used instead of the oak for tanning leather, and it is said that all Turkey leather is tanned with this plant. The leaves and seeds are used in medicine and are considered astringent and styptic: the Tripoli merchants sell the seeds at Aleppo, where they are used to provoke an appetite before meals.

The shrub is frequent in our gardens, retaining its dense clusters of deep red, rough berries till winter, after the leaves have fallen. It is quite hardy, and like most of the Sumachs is easily propagated by seed.

T.

THORNAPPLE

Botanical: Datura stramonium (LINN.)

Family: N.O. Solanaceae.

Synonyms: Stramonium. Datura. Devil's Apple. Jamestown-weed. Jimson-weed. Stinkweed. Devil's Trumpet. Apple of Peru.

Parts Used: Leaves, seeds.

Habitat: Throughout the world, except the colder or Arctic regions.

The Thornapple is, like the Henbane, a member of the order Solanceae. It belongs to the genus *Datura*, which consists of fifteen species, distributed throughout the warmer portion of the whole world, the greatest number being found in Central America. Nearly all of them are used locally in medicine, and are characterized by similar properties to those of the official species, *Datura Stramonium*. The plants vary from herbs to shrubs, and even trees.

The question of the native country and early distribution of *D. Stramonium* has been much discussed by botanical writers. It is doubtful to what country this plant originally belonged. Many European botanists refer it to North America, while there it is looked on as a denizen of the Old World.

Nuttall considers it originated in South America or Asia, and it is probable that its native country is to be found in the East. Alphonse de Candolle, *Géographie Botanique* (1855), gives it as his opinion that *D. Stramonium* is indigenous to the Old World, probably to the borders of the Caspian Sea or adjacent regions, but certainly not India; it grows wild abundantly in southern Russia from the borders of the Black Sea eastward to Siberia.

Its seeds are very retentive of life, and being often in the earth put on shipboard for ballast, from one country to another, the plant is thus propagated in all regions, and it is now spread throughout the world, except in the colder or Arctic regions. Gypsies are also said to have had a share in spreading the plant by means of its seeds from western Asia into Europe. In the United States, it is now a familiar weed, found everywhere in the vicinity of cultivation, especially about barnyards, timber-yards, docks and waste places, frequenting dung-heaps, the road sides and commons, and other places where a rank soil is created by the deposited refuse of towns and villages.

Where the plant grows abundantly, its vicinity may be detected by the rank odour which it diffuses. Notwithstanding the abundance of the plant in North America, it is cultivated there in order to obtain a drug of uniform quality.

The Bureau of Plant Industry, United States Department of Agriculture, has conducted experiments on a large scale: several hundred pounds of leaf were grown and cured by artificial heat in a tobacco barn, proving of excellent quality, being marketed at a price in advance of the highest quoted figures.

In Great Britain, it is only occasionally found and can scarcely be considered naturalized here, though it is sometimes met with in the south of England, generally in rich, waste ground, chiefly near gardens or dwellings. It is sometimes grown in private gardens in England as an ornamental plant. It was cultivated in London towards the close of the sixteenth century.

The name Stramonium is of uncertain origin: some authorities claim that it is derived from the Greek name of the madapple. *Stramonia* was the name of *D. metel* at Venice, in the middle of the sixteenth century, and the plant is figured under that title in the great Herbals of Tragus and Fuchsius. *D. Stramonium* seems to have been a later introduction into Europe than *D. metel*, not becoming general till after the middle of the sixteenth century, but as it rapidly spread and became a common plant, the name of the latter was transferred to it. The generic name, *Datura*, is from the *Hindoo Dhatura*, derived from the Sanskrit, D'hustúra, applied to the Indian species *fastuosa*, well known to the mediaeval Arabian physicians under the name of *Tatorea*.

Introduction

The Thornapple is a large and coarse herb, though an annual, branching somewhat freely, giving a bushy look to the plant. It attains a height of about 3 feet, its spreading branches covering an area almost as broad. On rich soil it may attain a height of even 6 feet.

The root is very long—thick and whitish, giving off many fibres. The stem is stout, erect and leafy, smooth, a pale yellowish green in colour, branching repeatedly in a forked manner, and producing in the forks of the branches a leaf and a single, erect flower. The leaves are large and angular, 4 to 6 inches long, uneven at the base, with a wavy and coarsely-toothed margin, and have the strong, branching veins very plainly developed. The upper surface is dark and greyish-green, generally smooth, the under surface paler, and when dry, minutely wrinkled.

The plant flowers nearly all the summer. The flowers are large and handsome, about 3 inches in length, growing singly on short stems springing from the axils of the leaves or at the forking of the branches. The calyx is long, tubular and somewhat swollen below, and very sharply five-angled, surmounted by five sharp teeth. The corolla, folded and only half-opened, is funnel-shaped, of a pure white, with six prominent ribs, which are extended into the same number of sharp pointed segments. The flowers open in the evening for the attraction of night-flying moths, and emit a powerful fragrance.

The flowers are succeeded by large, egg shaped seed capsules of a green colour, about the size of a large walnut and covered with numerous sharp spines, hence the name of the plant. When ripe, this seed-vessel opens at the top, throwing back four valve-like forms, leaving a long, central structure upon which are numerous rough, dark-brown seeds. The appearance of the plant when in flower and fruit is so peculiar that it cannot be mistaken for any other native herb.

The plant is smooth, except for a slight downiness on the younger parts, which are covered with short, curved hairs, which fall off as growth proceeds. It exhales a rank, very heavy and somewhat nauseating narcotic odour. This foetid odour arises from the leaves, especially when they are bruised, but the flowers are sweet-scented, though producing stupor if their exhalations are breathed for any length of time.

The plant is strongly narcotic, but has a peculiar action on the human frame which renders it very valuable as a medicine. The whole plant is poisonous, but the seeds are the most active; neither drying nor boiling destroys the poisonous properties.

The usual consequences of the poison when taken in sufficient quantity are dimness of sight, dilation of the pupil, giddiness and delirium, sometimes amounting to mania, but its action varies greatly on different persons. Many fatal instances of its dangerous effects are recorded: it is thought to act more powerfully on the brain than Belladonna and to produce greater delirium. The remedies to be administered in case of poisoning by Stramonium are the same as those described for Henbane poisoning, and also Belladonna poisoning. It is classed in Table II of the poison schedule. The pupils have become widely dilated even by accidentally rubbing the eyes with the fingers after pulling the fresh leaves of Stramonium from the plant.

The seeds have in several instances caused death, and accidents have sometimes occurred from swallowing an infusion of the herb in mistake for other preparations, such as senna tea.

Browsing animals as a rule refuse to eat Thornapple, being repelled by its disagreeable odour and nauseous taste, so that its presence is not really dangerous to any of our domestic cattle. Among human beings the greater number of accidents have occurred among children, who have eaten the halfripe seeds which have a sweetish taste.

The poisonous properties of the seeds are well known in India, where the Datura is abundant, the thieves and assassins not unfrequently administering them to their victims to produce insensibility.

In America it is called the *'Devil's Apple,'* from its dangerous qualities and the remarkable effects that follow its administration. When the first settlers arrived in Virginia, some ate the leaves of this plant and experienced such strange and unpleasant effects that the colonists (so we are told) gave it this name by which it is still known in the United States. It is also known very commonly there by the name of *'Jamestown* (or *Jimson*) *Weed,'* derived probably from its having been first observed in the neighbourhood of that old settlement in Virginia.

There are two varieties of this species of Datura, one with a green stem and white flowers, the other with a dark-reddish stem, minutely dotted with green and purplish flowers, striped with deep purple on the inside. The latter is now considered as a distinct species, being the *D. Tatula* of *Linnaeus*. The leaves are mostly of a deeper green, and have purplish foot-stalks and mid-ribs.

De Candolle considered D. Tatula to be a native of Central America, whence it was imported into Europe in the sixteenth century, and naturalized first in Italy and then in South-west Europe, where it is very common.

It occurs in England more rarely than D. Stramonium, under similar conditions and seems a more tender plant. It is sometimes cultivated here. The properties of both species are the same.

In early times, the Thornapple was considered an aid to the incantation of witches, and during the time of the witch and wizard mania in England, it was unlucky for anyone to grow it in his garden.

Cultivation

Thornapple is easily cultivated, growing well in an open, sunny situation. It will flourish in most moderately good soils, but will do best in a rich calcareous soil, or in a good sandy loam, with leaf mould added. Seeds are sown in the open in May, in drills 3 feet apart, barely covered. Sow thinly, as the plants attain a good size and grow freely from seed. Thin out the young plants to a distance of 12 to 15 inches between each plant in the drill. From 10 to 15 lb. of seed to the acre should be allowed.

The soil should be kept free from weeds in the early stages, but the plants are so umbrageous and strong that they need little care later. If the summer is hot and dry, give a mulching of rotted cow-manure.

The plants may also be raised from seeds, sown in a hot-bed in February or March, or in April in boxes in a cool greenhouse, the seedlings, when large enough, being transferred to small pots, in which they are grown with as much light and air as possible till June, when they are planted in the open. Thornapple transplants readily.

If grown for leaf crop, the capsules should be picked off as soon as formed, as in a wind the spines tear the leaves. Some seed, for propagation purposes, should always be collected from plants kept specially for the purpose. Though cultivated in this country, on some of the herb farms, such as Long Melford and Brentford, Thornapple was not much grown on a commercial scale before the War, considerable quantities of the dried leaves having always been imported from Germany and Hungary.

Parts Used, Harvesting and Preparation for Market

All parts of the Thornapple have medicinal value, but only the leaves and seeds are official. The United States Pharmacopceia formerly recognized leaves, root and seeds, but since 1900 the leaves alone are recognized as official. They are used in the dried state and are referred to as *Stramonium*. Stramonium leaves are official in all Pharmacopoeias. Many require that they be renewed annually. The Belgian excludes discoloured leaves. The Portuguese directs the use of the entire plant except the root, and allows the substitution of *D. Tatula*. To how great an extent it is true that the quality deteriorates on being kept is conjectural.

The commercial drug as imported into Great Britain consists of the leaves and young shoots, collected while the plant is in flower, and subsequently dried, and containing the shrivelled, bristly young fruits, tubular calyx, and yellowish corolla, but the official Introduction, for medicinal purposes, permits of the use of the leaves only.

The leaves should be gathered when the plant is in full bloom and carefully dried. The United States Pharmacopoeia considers that they may be gathered at any time from the appearance of the flowers till the autumnal frosts. In this country they are generally harvested in late summer, about August, the crop being cut by the sickle on a fine day in the morning, after the sun has dried off the dew, and the leaves stripped from the stem and dried carefully as quickly as possible, as for Henbane.

The dried leaves are usually much shrivelled and wrinkled, and appear in commerce either loose, or more or less matted together, of a dark-greyish green colour, especially on the upper surface, stalked and often unequal at the base, and are characterized by the very coarse pointed teeth. About 34 parts of dried leaves are produced from 100 parts of fresh leaves. The fresh leaves, when bruised, emit a foetid, narcotic odour, which they lose on drying. Their taste is bitter and nauseous. These properties, together with their medicinal virtues, are imparted to water and alcohol and the fixed oils. The leaves if carefully dried retain their bitter taste. The inspissated juice of the fresh leaves was formerly commonly prescribed, but the alcoholic extract is now almost exclusively used.

Stramonium seeds are official in a number of Pharmacopoeias. The thorny capsules are gathered from the plants when they are quite ripe, but still green.

They should then be dried in the sun for a few days, when they will split open and the seeds can be readily shaken out. The seeds can then be dried, either in the sun or by artificial heat.

The dried, ripe seeds are dark brown or dull black in colour, flattened, kidney-shaped in outline, wrinkled and marked with small depressions, and average about 1/6 inch in length.

Though ill-smelling when fresh, when dry they have a scarcely perceptible odour till crushed, but a bitter, oily taste. They should not be stored in a damp place, or will mildew. Kiln-dried seeds, it should be noted, are no use for cultivation.

The demand for the seed is very limited, but the dry leaves find a ready market. The south of Europe furnishes a quantity, but owing to careless collection and neglect of botanical characters, the South European product is often mixed with other leaves of no value, which are sometimes entirely substituted for it, especially species of *Xanthium*, which has spiny though smaller fruits. Spanish Stramonium which contains no Stramonium at all has been offered in London and Liverpool.

The imported commercial Stramonium leaves are also frequently found freely adulterated with those of *Carthamus helenoides*.

Constituents

Stramonium leaves contain the same alkaloids as Belladonna, but in somewhat smaller proportion, the average of commercial samples being about 0.22 percent: the percentage may, however, rise to as much as 0.4 percent.

The mid-rib and foot stalk of the leaf contain a far larger proportion than the blade. It is generally considered that the main stems and the root contain little alkaloid, and should, therefore, not be present in the drug.

The American Journal of Pharmacy (January, 1919) directs attention to the fact that if the stems could be utilized, the cost of labour in harvesting a crop of Stramonium would be only onefourth or one-fifth of what it is where the leaves alone are gathered, since machinery for the purpose could be employed. Dr. G. B. Koch, of the Biological Laboratories of the H.K. Mulford Co., Philadelphia, has been making careful experiments on the relative value of the stem and root of this plant, and has arrived at the following conclusions:

1. The whole plant, either with or without the root, can be harvested and used for the commercial preparations without fear of the total alkaloid content falling below 0.25 percent, which is the desired standard of the United States Pharmacopoeia.
2. The total mydriatic (pupil-dilating) alkaloids of the leaf and secondary stems when analysed individually, or the leaves with 10 percent of the secondary stems, run much higher than the United States Pharmacopoeia requirement.

3. Of the whole plant, including stem, root and leaf, the leaf represents about 41 percent.
4. Excluding the root, the ratio of the leaf to the stem is about 47.5 to 52.3 percent.

In general it has been found that fresh parts yielded more alkaloid than the dried parts. The alkaloid consists chiefly of hyoscyamine, associated with atropine and hyoscine (scopolamine), malic acid also being present. The Daturin formerly described as a constituent is now known to be a mixture of hyoscyamine and atropine. The leaves also yield 17 to 20 percent of ash, and are rich in potassium nitrate, to which, doubtless, part of the antispasmodic effects are due, and they contain also a trace of volatile oil, gum, resin, starch, and other unimportant substances.

Seeds: Except that they contain about 25 percent of fixed oil, the constituents of the seeds are practically the same as those of the leaves, though considered to contain a much greater proportion of alkaloid, which renders them more powerful than the leaves. But the presence of the large amount of fixed oil makes it difficult to extract the alkaloids or to make stable preparations and the leaves have, therefore, greatly taken the place of the seeds.

Medicinal Action and Uses

Antispasmodic, anodyne and narcotic. Its properties are virtually those of hyoscyamine.

It acts similarly to belladonna, though without constipating, and is used for purposes similar to those for which belladonna is employed, dilating the pupil of the eyes in like manner. It is considered slightly more sedative to the central nervous system than is belladonna. Stramonium is, in fact, so similar to belladonna in the symptoms produced by it in small or large doses, in its toxicity and its general physiological and therapeutic action, that the two drugs are practically identical, and since they are about the same strength in activity, the preparations may be used in similar doses.

Stramonium has been employed in all the conditions for which belladonna is more commonly used, but acts much more strongly on the respiratory organs, and has acquired special repute as one of the chief remedies for spasmodic asthma, being used far more as the principal ingredient in asthma powders and cigarettes than internally.

The practice of smoking D. ferox for asthma was introduced into Great Britain from the East Indies by a certain General, and afterwards the English species was substituted for that employed in Hindustan. Formerly the roots were much used: in Ceylon, the leaves, stem and fruit are all cut up together to make burning powders for asthma, but in this country the dried leaves are almost exclusively employed for this purpose.

The beneficial effect is considered due to the presence of atropine, which paralyses the endings of the pulmonary branches, thus relieving the bronchial spasm. It has been proved that the smoke from a Stramonium cigarette, containing 0.25 grams of Stramonium, leaves contains as much as 0.5 milligrams of atropine. The leaves may be made up into cigarettes or smoked in a pipe, either alone, or with a mixture of tobacco, or with cubebs, sage, belladonna and other drugs. More commonly, however, the coarsely-ground leaves are mixed into cones with some aromatic and with equal parts of potassium nitrate, in order to increase combustion and are burned in a saucer, the smoke being inhaled into the lungs.

Great relief is afforded, the effect being more immediate when the powdered leaves are burnt and the smoke inhaled than when smoked by the patient in the form of cigars or cigarettes, but like most drugs, after constant use, the relief is not so great and the treatment is only palliative, the causation of the attack not being affected.

Accidents have also occasionally happened from the injudicious use of the plant in this manner.

Dryness of the throat and mouth are to be regarded as indications that too large a quantity is being taken.

The *seeds*, besides being employed to relieve asthma in the same manner as the leaves, being smoked with tobacco, are employed as a narcotic and anodyne, generally used in the form of an extract, prepared by boiling the seeds in water, or macerating them in alcohol. A tincture is sometimes preferred.

The extract is given in pills to allay cough in spasmodic bronchial asthma, in whooping-cough and spasm of the bladder, and is considered a better cough-remedy than opium, but should only be used with extreme care, as in over-doses it is a strong narcotic poison. Applied locally, in ointment, plasters or fomentation, Stramonium will palliate the pain of muscular rheumatism, neuralgia, and also pain due to haemorrhoids, fistula, abscesses and similar inflammation.

Preparations and Dosages

Powdered leaves, 1/10 to 5 grains. Fluid extract leaves, 1 to 3 drops. Fluid extract seeds, 1 to 2 drops. Tincture leaves, B.P. and U.S.P., 5 to 15 drops. Powdered extract, U.S.P., 1/5 grain. Solid extract, B.P., 1/4 to 1 grain. Ointment, U.S.P.

Gerard declared that:

'the juice of Thornapple, boiled with hog's grease, cureth all inflammations whatsoever, all manner of burnings and scaldings, as well of fire, water, boiling lead, gunpowder, as that which comes by lightning and that in very short time, as myself have found in daily practice, to my great credit and profit.'

It has been conjectured that the leaves of *D. Stramonium* were used by the priests of Apollo at Delphi to assist them in their prophecies, and in the Temple of the Sun, in the city of Sagomozo the seeds of the Floripondio (*D. Sanguinea*) are used for a similar purpose. The Peruvians also prepare an intoxicating beverage from the seeds, which induces stupefaction and delirium if partaken of in large quantities.

The Arabs of Central Africa are said to dry the leaves, the flowers, and the rind of the rootlet, which is considered the strongest preparation, and to smoke them in a common bowl, or in a waterpipe.

It is esteemed by them a sovereign remedy for asthma and influenza, and although they do not use it like the Indian Datura poisoners, accidents nevertheless occur from its narcotic properties. Stramonium was at one time esteemed as a sedative in epilepsy, and in acute mania and other forms of active insanity, but its action is very uncertain.

The introduction of Stramonium into medicine is due chiefly to the exertions of Baron Storch, in the latter half of the eighteenth century, who was also instrumental in re-introducing Henbane into modern medicine.

In a recent issue of an American medical journal, the opinion was expressed that Stramonium was a remedy for hydrophobia, the writer saying 'there is no drug so far proven that deserves as thorough and careful a trial in this dread disease as Stramonium.'

The poorer Turks are said to use Stramonium instead of opium, for smoking.

Other Species

In India and the Eastern and West Indian Colonies, the leaves and seeds of *D. fastuosa* var. *alba* are also official, under the name of Datura. They possess similar properties, and are regarded as of equal strength.

D. fastuosa is a small shrub indigenous to tropical India. There are said to be several varieties of this species, and it is generally conceded to be the most toxic of the Indian *Daturas*: The leaves are ovate and more or less angular, the flowers being mostly purplish, sometimes white.

Of the varieties of *D. fastuosa*, the British Pharmacopoeia recognizes that known as alba. From it the Thugs prepared the poison *Dhât*, with which they used to stupefy their victims. It is used in India as a criminal poison, the professional poisoners being called Dhatureeas.

The drug has a slight, unpleasant odour and a bitter taste. It contains the alkaloid Hyoscine, a resin and a fixed oil, hyoscyamine being also present and a small proportion of atropine. It is used by the native doctors (India) for the relief of rheumatic and other painful affections.

While this drug produces effects more or less similar to those of belladonna, its precise action has not been clearly determined.

This species of Datura grows in abundance in almost all the islands of the Philippine group, in some localities reaching a height of 6 feet, and might afford a favourable source of atropine and hyoscyamine, though it has not so far been made use of commercially, there being no attempt at cultivation or even systematic collection of the drug, though attention was drawn to its latent possibilities during the War.

Under the names of *Man t'o lo fa, Wan t'o hua* and *Nau Yeung fa* the Chinese use as a medicine the flowers of the *D. alba*.

D. metel is also an Indian plant and resembles *D. fastuosa*; it differs in that the leaves are heart-shaped, almost entire and downy, and the flowers always white. The leaves contain 0.55 percent alkaloid, the seeds 0.5 percent, all hyoscine.

D. alba or *D. metel* also produce similar effects. The Rajpoot mothers are said to smear their breasts with the juice of the leaves, to poison their newly-born female infants.

D. arborea, a South American species (the Tree Datura), growing freely in Chile, contains about 0.44 percent alkaloid, nearly all hyoscine. A tincture of the flowers is used to induce clairvoyance.

D. quercifolia, of Mexico, contains 0.4 percent. in the leaves and 0.28 percent of alkaloids in the seeds, about half hyoscyamine and half hyoscine. *El Bethene*, a Datura of the Sahara

Desert, is capable of causing delirium, coma and death. *D. Tatula*, Purple Stramonium has already been mentioned. It owes its activity to the same alkaloids as *D. Stramonium*, and its leaves are also much used in the form of cigarettes as a remedy for spasmodic asthma. *D. ferox*, Chinese Datura, is used in homoeopathy.

A tincture is made from the unripe fruit and a trituration of the seeds.

An Old Recipe 'for A Burne'

'Take of the plant called Thorneaple, and Elder leaves, 2 good handfuls; pound both leaves and apples very small in A stone mortar; then take a pound of Barow hogs lard watered and putt them altogether in an earthen pan, working them well together; lett itt stand till it begins to hoare [grow musty], and then sett itt over A soft fire, not letting it boyle; then strain it, and putt in fresh herbs; order itt as before; this doe three times; and then keep itt for your use, it will keep seven years.'—(*A Plain Plantain*.)

W

WAKE ROBIN, AMERICAN

Botanical: Arum triphyllum (LINN.)

Family: N.O. Araceae.

Synonyms: Dragon Root. Wild Turnip. Devil's Ear. Pepper Turnip. Indian Turnip. Jack-in-the-Pulpit. Memory Root. Arisamae triphyllum (Schott.).

(French) Gouet à trois feuilles.

(German) Dreiblattiger Aron.

Part Used: The root (fresh corm).

Habitat: Eastern North America in damp places. Indigenous almost all over United States and Canada.

Introduction

The plant has a round flattened perennial rhizome, the upper part tunicated as in the onion, the lower and larger portion tuberous and fleshy, with numerous long white radicles in a circle from its upper edge, the under-side covered with a dark, loose, wrinkled epidermis.

Spathe ovate, acuminate, convoluted into a tube at the bottom, flattened and bent at top like a hood, varying in colour internally, supported by an erect scape inverted at base by petioles and their acute sheaths.

Spadix club-shaped, shorter than spathe, rounded at end, contracted at base, surrounded by stamens or ovaries; the upper portions of the spadix withers together with the spathe, whilst the ovaries grow into a large compact bunch of shining scarlet berries. Leaves, one or two standing on long sheathing foot-stalks, ternate. Leaflets oval, mostly entire, acuminate,smooth, paler on under-side, becoming glaucous with growth, the two lateral ones rhomboidal.

Constituents

In the recent state it has a peculiar odour and is violently acrid. It has been found to contain besides the acrid principle, 10 to 17 percent of starch, albumen, gum, sugar, extractive, lignin and salts of potassium and calcium.

Medicinal Action and Uses

Acrid, expectorant, and diaphoretic. Used in flatulence, croup, whooping-cough, stomatitis, asthma, chronic laryngitis, bronchitis and pains in chest. In the fresh state it is a violent irritant to the mucous membrane, when chewed burning the mouth and throat; if taken internally this plant causes violent gastro-enteritis which may end in death.

Dosage

Powdered root, 10 grains two or three times daily.

The perfectly fresh root should not be used and the fully dried root is inactive.

Antidote

Strong tea and stimulants.

Y

YEW

Botanical: Taxus baccata.

Family: N.O. Taxaceae and Coniferae.

Poisonous Parts: Leaves, seed and fruit.

Habitat: Europe, North Africa, Western Asia.

Introduction

A tree 40 to 50 feet high, forming with age a very stout trunk covered with red-brown, peeling bark and topped with a rounded or wide-spreading head of branches; leaves spirally attached to twigs, but by twisting of the stalks brought more or less into two opposed ranks, dark, glossy, almost black-green above, grey, pale-green or yellowish beneath, 1/2 to 1 1/2 inches long, 1/16 to 1/12 inch wide.

Flowers unisexual, with the sexes invariably on different trees, produced in spring from the leaf axils of the preceding summer's twigs. Male, a globose cluster of stamens; female, an ovule surrounded by small bracts, the so-called fruit bright red, sometimes yellow, juicy and encloses the seed. No tree is more associated with the history and legends of Great Britain than the Yew. Before Christianity was introduced it was a sacred tree favoured by the Druids, who built their temples near these trees—a custom followed by the early Christians. The association of the tree with places of worship still prevails. Many cases of poisoning amongst cattle have resulted from eating parts of the Yew.

Constituents

The fruit and seeds seem to be the most poisonous parts of the tree. An alkaloid taxine has been obtained from the seeds; this is a poisonous, white, crystalline powder, only slightly soluble in water; another principle, Milossin, has also been found.

Uses

The wood was formerly much valued in archery for the making of long bows. The wood is said to resist the action of water and is very hard, and, before the use of iron became general, was greatly valued. (In homoeopathy a tincture of the young shoots and also of the berries is used in a variety of diseases: cystitis, eruptions, headache and neuralgia, affections of the heart and kidneys, dimness of vision, and gout and rheurmatism.—Editor)

PART—Four

Aromas & Therapies

AMBER

Transforms negative energy into positive. Calms, and attracts loving, faithful emotions. Opens the crown chakra and aligns the etheric bodies with the physical. Attracts prosperity.

BAY

Activates the throat chakra and opens the bronchial passages. Facilitates full breath and full expression. Decongestive on all levels. Heals the heart. Good for colds, flu, rheumatism and sprains. Psychic purifyer.

BENZOIN

Awakens higher mindedness. Encourages confidence and empowerment. Calms and sedates the mind and emotions. Relieves dry skin, coughs, and arthritis. Natural deoderant and preservative.

CARROT SEED

Mother Nature's skin nurturer. Relieves and replenishes dry, aging skin. Helps to reduce wrinkles and restore elasticity. Stimulates endocrine function. *Not for use during pregnancy.

CEDAR

Attracts prosperity. Encourages flow. Elimination of blockages, and toxins, physically, mentally, and emotionally. Cleanses and purifies the body, skin and the environment from all negativity and stagnation. Gives relief from bronchitis, colds, arthritis, and can have a diuretic effect. Repels incects. *Not for use during pregnancy.

CHAMOMILE

Calms the nervous system, and in turn, the mind and digestive system. Peace. Helps the heart to understand. Dissolves negativity. Anti-inflammitory action helps with rheumatism, burns, asthma, and depression. Protects and heals dry hair and skin conditions. Very gentle healing oil.

CINNAMON

Psychic awareness and protection. Blends with and emphasizes all other essences. Attracts money and "security". Aphrodisiac. Very healing on all levels. Good for colds, flu, headache, toothache, and sore muscles. Helps to heal the heart and kidneys.

CITRONELLA

Protects, cleanses and clears the aura. Strengthens the life-force. Encourages self-expression and creativity. Good for writers and actors. Brings clarity to the mind and inner vision. Good for attracting prosperity. Activates the throat chakra and acts as a tonic for all throat ailments. Repells insects. Deoderizer.

CLARY SAGE

Calming relaxant. Brings well-being to the spirit. Contains a hormone-like agent similar to estrogen that regulates hormonal balance. Relieves tired, sore or injured muscles and menstrual cramping when used in massage. Aphrodesiac. Antiseptic for oily skin and dandruff. *Not for use during pregnancy. Do not drink alcohol or drive when under it's influence.

CLOVE

Protects and cleanses the body and aura. Balances 2nd and 4th chakras. Calming and comforting to the emotions. Strengthens eyesight and protects one from disease and infection. Very antiseptic, good for oral infections and toothache pain. Assists with digestive, muscular, and bronchial ailments.

DRAGON'S BLOOD

Energizes and attracts inspiration and success. Protection. Virility, strength and passion. Attraction of male energies. Purifies, "burns" out illness and infection. Helps heal bones, teeth, blood disorders, and reproductive organs.

EUCALYPTUS

Powerful antiseptic, widely used in baths and massage during the cold season. Blend oil in chest rubs and use in a vaporiser to keep air germ free in sick room. Blends well with Lavender and Pine. Antiseptic, for fevers, sore throats, and colds, expectorant, burned for healing and protection. Good for all problems with sinuses and lungs, colds, flu, bronchitis, asthma, helps acne.

EVENING PRIMROSE

Rich in GLA, vitamins and minerals. Excellent for face and body massage, especially to combat dry, skin and eczema. A nerve tonic, Hormonal balancer, good for menstrual problems and for balancing the effects of menopause.

FRANKINCENSE

A sacred, purifying scent used to cleanse the body, aura, and environment of all negative influences. Promotes a meditative state. Sun energy. Opens the crown chakra and has a healing affect on infections, and viruses. Revitalizes dry and|or aging skin. Helps with asthma and bronchial infections.

GERANIUM

Balances the mind and body. Calms and stabilizes the emotions. Astringent, Good healing oil for all skin types. Helps to relieve eczema and psoriasis. Repels insects and negative thought forms and environments. Diuretic. Good as a massage oil for cellulite.

Grapefruit

Refreshing and uplifting. Brings renewed energy, "a second wind". Antiseptic to the skin. Tones all bodily tissues and helps *erase* cellulite. Antidepressant.

HONEYSUCKLE

Strengthens the mind and memory. Balancing to the right and left brain. Awakens the crown and brow chakra's, bringing psychic awareness. Induced prophetic dreams and assists one to let go of the past. Strengthens and brings flexibility to the body. Helps heal sore throats, headaches and asthma.

JASMINE

Good luck in love and wealth. Aphrodisiac. Alleviates depression, and tension. Raises self esteem. Opens the heart chakra and stimulates clarity of thought. Enables one to lucid dream, when it is used before sleeping. Good for use during childbirth. Rejuvinates the skin when used in massage and cosmetics. Beautiful fragrance when worn as a single note.

JUNIPER BERRIES

Protection from all negative influences. Transforms negative emotions into positive. Purifies the aura and the subtle body. Diuretic action also encourages "flow" in all areas of life. *Not for use during pregnancy. Tonic, astringent, and antiseptic. Reduces swelling and relieves arthritis. Good for dissolving fat and cellulite when used with massage. Is believed to boost the immune system.

LAVENDER

Ancient scent used for protection, relaxation, and healing. Good for headaches, insomnia, pain, arthritis, and depression. Antiseptic and astringent. Good for burns, insect bites, acne and eczema. Helps to reduce scarring. Promotes hair growth. Activates the crown chakra. Ancients believed it ensured fidelity.

LEMON

Attracts joy and benevolent energies. Clears and stimulates the mind while relaxing the muscles and relieving stress. Attunes to the third chakra. Antibacterial and antiseptic. Good for oily skin conditions. Tonic to the lymphatic and digestive system. Very good for dieters, when put in water, and will help break up cellulite when used with massage. Bleaches hair and fabrics. Conditions skin and nails. Dilute well when used on skin.

MANDARIN

Mild, calming oil used for massage and the digestive system. Can help prevent stretch marks when used in massage.

MUGWORT

Awakens one to the psychic energies around and within them. Facilitates astral travel and dream interpretation. Opens and purifies circulatory channels. Strengthens the uterus and eases painful menstrual cramping. Excellent for strengthening the life-force in the fetus. Some say *Not for use during pregnancy.

MUSK

Stimulates the root and spleen chakras, arousing the reproductive organs and instincts. Healing and cleansing to the heart, lungs, and blood. Encourages self-esteem, and desirability. Can assist in transmuting sexual love into higher emotion, and spiritual connection.

MYRRH

Powerful purifier. Helps to heal bacterial, fungal and viral infections. Anti-inflammatory. Good for oral hygiene and gum infections. Good for dry skin conditions. *Not for use during pregnancy. Promotes faithfulness. Inspires positive thoughts and words. Holy blessings.

NAG CHAMPA

Sacred incense of India. Good for meditation, and prayer. Soothes, and calms. Clears and purifies all chakras. Attracts assistance from higher realms.

NEROLI

Soothes, relaxes, and uplifts the spirit. Instills confidence. Excellent for dry sensitive skin, scars and stretch marks. Aphrodesiac. Stimulates circulation. Brings calm and relieves stress and tension. Good for calmin "butterflies" in the stomach.

NIAOULI

Protection. Antiseptic, helps to heal cuts and wounds, infections, acne, skin irritations and allergies. Bacterial viruses, Sore throats, and respiratory problems. Good when used in a vaporisor or as a chest rub for bronchial clearing.

NUTMEG

Calms the mind and body therefore it is good for insomnia. Brings visions. Attracts wealth and health. Good for the intestinal tract, and reproductive organs. Is said to reverse impotency and hair loss. *Can be dangerous if taken internally. As a seasoning is fine.

OLIVE

Peace of heart and mind. Assures fidelity in love and can attract a marriage partner. Inspires fruitfulness and security in love, family and business. Attracts money. Revitalizes all physical systems as well as the mind.

ORANGE

Purification on every level. Encourages emotional expression and the gentle healing and restructuring of emotional memories. Attracts abundance and happiness, through love and marriage. Tonic to the digestive system. Antiseptic. Good for oily skin. Dilute well when used on the skin.

ORRIS

Aphrodesiac. Attracts love and romance. Good for treating acne and insect bites. Helps relieve coughs, colds and bronchitis. Diuretic, said to ease upset stomach and toothache. Whole pieces of the root have been used as infants teething rings. The violet-like scent grows more beautiful with age.

PALMAROSA

Attracts Love. Regenerates the cellular body. Clears and "wakes up" the mind. Powerful healer for skin conditions such as acne, eczema and dry aging skin. Antiseptic. Helps to regulate the thyroid. Used to treat anorexia and as a tonic for the entire system.

PARSLEY

Purification on all levels. Diuretic. Helps to relieve urinary tract infection and kidney problems. Rich in vitamin B and potassium. Good for gall bladder problems and helping to expel gall stones. Excellent breath deoderant. Stimulates the pituitary gland. Sedative, good for nervous conditions. Parsely has been said to dry up mother's milk after birth.

PATCHOULI

Aphrodesiac, awakens fertility. Stimulates and balances the yin or feminine aspects. Purifies and aligns the root, and spleen chakras. Attracts prosperity Dispels negativity. Clears the complexion and helps heal other skin conditions. Preserves youth.

PENNYROYAL

Creates a shield of protection. Repels negativity. Energizes the body and calms the mind and nerves. Diuretic. Good for colds and bronchitis. Eases nausea and intestinal cramps. Fortifies the spleen and solar plexus chakras. Used for ulcers, headache and fever. Tonic for the reproductive system. *Not for use during pregnancy as it stimulates menstruation and uterine contractions. Deoderant and insecticide.

PEPPERMINT

Purifies. Attracts positive energies. Eliminates static and "cobwebs" from the aura, and mind. Clears the respiratory passages. Revitalizes and rejuvinates the mind and body. Relieves depression. Helps to alleviate bronchial spasms and asthma. Cooling to fever and inflamation. Good for the digestive system and for nausea.

PETTIGRAINE

Uplifting, relieves stress and anxiety. Cleanses and rejuvinates and the spirit. Brings clarity to the mind. Helps to relieve insomnia. Good for healthy hair. Antiseptic and tonic. Deoderizing and insecticidal. Good for sunburn and itchy skin.

PINE

Cleansing and rejuvinating. Fresh starts. Inspires positive, enthusiastic feelings. Good for colds, bronchitis, and asthma. Antiseptic and deoderizing. Repels insects. Brings harmony to the home.

POPPY SEED

Quiets the mind and brings visions. Induces calm and restful sleep. A tonic for the digestive, respiratory, and circulatory system, therefore, it is very good for healing these areas. Pain reliever.

ROSE

Attracts love, confidance and healing to the heart. Activates in or feminine energies. Calms emotions and brings understanding. Protects secrets. Christ consciousness. Soothes and heals female reproductive organs. Help to heal sore throats and cold sores. Very good for rejuvinating the skin. Awakens sensuality.

ROSEMARY

Clears the mind and opens blocked passages, both in the body and elsewhere. Brings the desired information by tapping into the universal mind. Facilitates inner peace and contentment. Attracts love. Good for emotional healing. Stimulates and rejuvinates tired muscles. Diuretic and helps to break down cellulite when used in massage. Restores suppleness and shine to the hair.

ROSEWOOD

Upliftinganti-depressant.Relaxesandrestores sore muscles and nerves. Helps headaches and fights off the beginning phases of cold and flu. Antiseptic and very healing to skin conditions like acne. Deodorant.

SAGE

Permeates the environment and creates a barrier of protection while neutralizing the existing negativity. Sacred to Native Americans as a "smudging" herb. Attracts well-being and prosperity. Brings what is needed. Astringent. Helps heal skin eruptions. Good for sores, bacterial infections, bronchitis, rheumatism, arthritis, catarrh, sprains and aching muscles. Helpful for relieving depression, anxiety and exhaustion. Calms the digestion and eases menstrual cramping. *Not for use during pregnancy.

SANDALWOOD

Aligns all chakras, allowing healing energy to flow through and out. Sedates and relaxes. Good for meditation, healing, and manifestation practices. Aphrodisiac. Awakens sacred sensuality. Facilitates concentration. Considered to betstow holy protection. Regenerates dry|aging hair and skin.

SASSAFRAS

Attracts prosperity. Use externally and for aromatic purposes. May be made into a light tea. Great for skin conditions like eczema and poison ivy and acne. Anti-inflamatory. Clears red eyes when mixed with Rosewater. Good as mouthwash for sore swollen gums. Calms and balances the mind. *Not for internal use during pregnancy as it stimulates menstrual flow.

SPEARMINT

Cooling stimulant. Restores energy and balance to the system. Strengthens the nerves and muscles. As a tea, spearmint calms a nervous stomach rapidly. Deodorant and insect repellant. Relieves insomnia. Antiseptic. Helps headaches, fever, indigestion, Intestinal cramps, colic and hemorroids. Helps to aleviate depression.

TANGERINE

Purification. Awakens joy, and dissolves negativity. Antiseptic and antispasmodic. Assists in lymph drainage. Balances dry scalp and dandruff conditions while moisturizing hair and skin. Sedative and tonic.

TARRAGON

Protection. Prevents fatigue, stimulates the appetite, relieves gastrointestinal disorders, colic and rheumatism. Anesthetic action can help toothaches. Calms nervous stomach. Antioxidant and antifungal. Enhances and protects health and well-being. Can stimulate menstruation when taken internally in large quantities so *not for theraputic use during pregnancy.

TEA TREE

Nature's antiseptic. Good for use on wounds, burns, insect bites, scratches, rashes, and herpe's. Relieves itch and kills germs. Good for dandruff, athlete's foot, acne, ringworm, candida and warts. Antifungal and anti-viral. Good as an airborne disinfectant.

THYME

Courage and confidance. Helps insomnia and depression. Brings calm and balance to the 6th and 7th chakras. Accelerates the healing process and strengthens the immune system. Antibiotic, antiseptic and diuretic. Very good for lung ailments, viruses and infections. Brings relief for bladder infections. Revives the liver and circulatory system. Regulates digestion and eases indigestion. Disinfectant and insect repellent. *Not for use during pregnancy or in cases of high blood pressure.

TUBEROSE

"The Mistress of the Night", awakens erotic feelings, and attracts romance. Enhances the capacity for emotional depth. Brings peace to the mind and heart. Opens the crown chakra and assists in psychic development. Attracts inspiration. Tonic for the reproductive system as well as the heart and mind.

VERVAIN

Ancient and sacred even to the Egyptians, Persians and Druids, Vervain is said to be a purifyer of the physical and spiritual body. Attracts and brings luck in love and prosperity. Calms the body and nerves while stimulating the mind. Can promote lucid dreams and out of body travels. Astringent and antispasmodic. *Not for use during pregnancy. Stimulates blood flow and the bodies self-cleaning mechanisms. May cause nausea when taken internally. Believed to shrink swollen tissues and tumors when used as a poultice.

VETIVERT

Protection. Attracts prosperity, love and feelings of security. Awakens sensuality and repels negativity. Stimulates circulation and helps relieve arthritis and joint pain. Relaxing. Said to help lower blood pressure.

YARROW

Attracts love and calm, self confidence. Courage. Soothing to the heart. Said to stimulate hair growth, when used as shampoo. Aleviates dandruff. Astringent and anti-inflammatory. Helps to stop internal and external bleeding (helps blood to thicken). Assists in healing persistent wounds and infections. Brings healing to all mucous membranes. Calms digestive tract. Good for bringing rapid recovery from the flu. Relieves toothache.

YLANG YLANG

Aphrodesiac. Promotes calm, peaceful relaxation. Relieves anxiety and depression. Good for insomnia and meditation. Tones and awakens the sex center. Lowers blood pressure. Restores skin and hair to a natural, balanced state of health.

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Teresa Baldwin is a medical herbalist living on Vancouver Island in British Columbia. She has an extensive background in orthomolecular nutrition and allergy therapy as well as clinical aromatherapy. After a year long journey embracing North America, China, Russia, Eastern Europe and the Middle East, Teresa became deeply involved in the herbal renaissance that is underway in North America. She currently heads *The School of Herbal Studies*, Canada's respected centre of herbal education and regularly teaches in Canada, USA and New Zealand. She is also the author of *An Encyclopedia of Natural Healing for Children and Infants*.

Vincent Scalzo, a herbalist, botanical researcher, has co-authored several books with Teresa Baldwin including *Herbal Solutions for Healthy Living* and *Traditional Medicines from the Earth*. He also specializes in traditional Chinese medicine and Naturopathy. Vincent has a garden of his own where he cultivates medicinal herbs. An ardent practitioner of Yoga, he maintains and prepares many antique potions of Dr. Culpeper, many of which, he finds, have magical effect on health and well being.

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